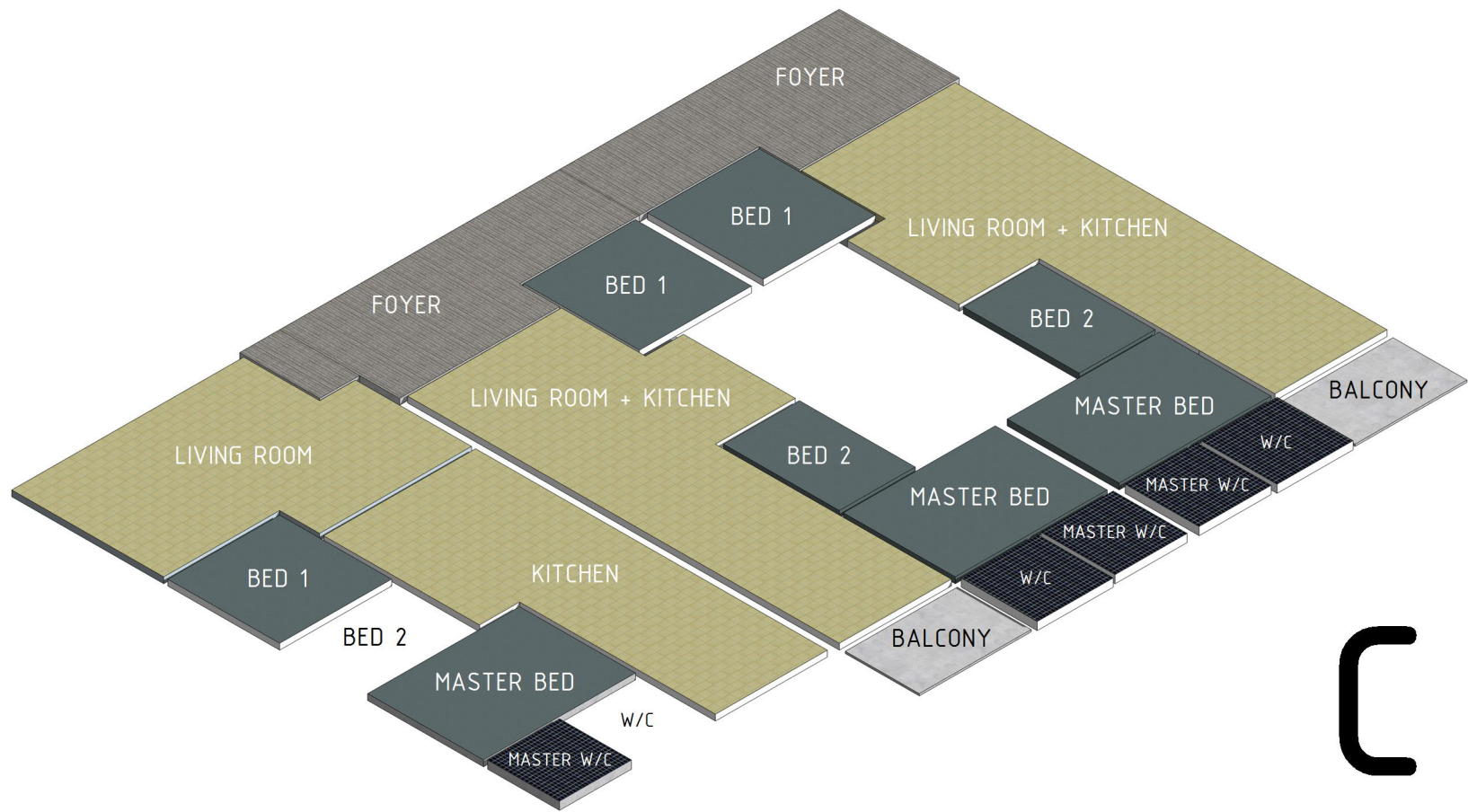


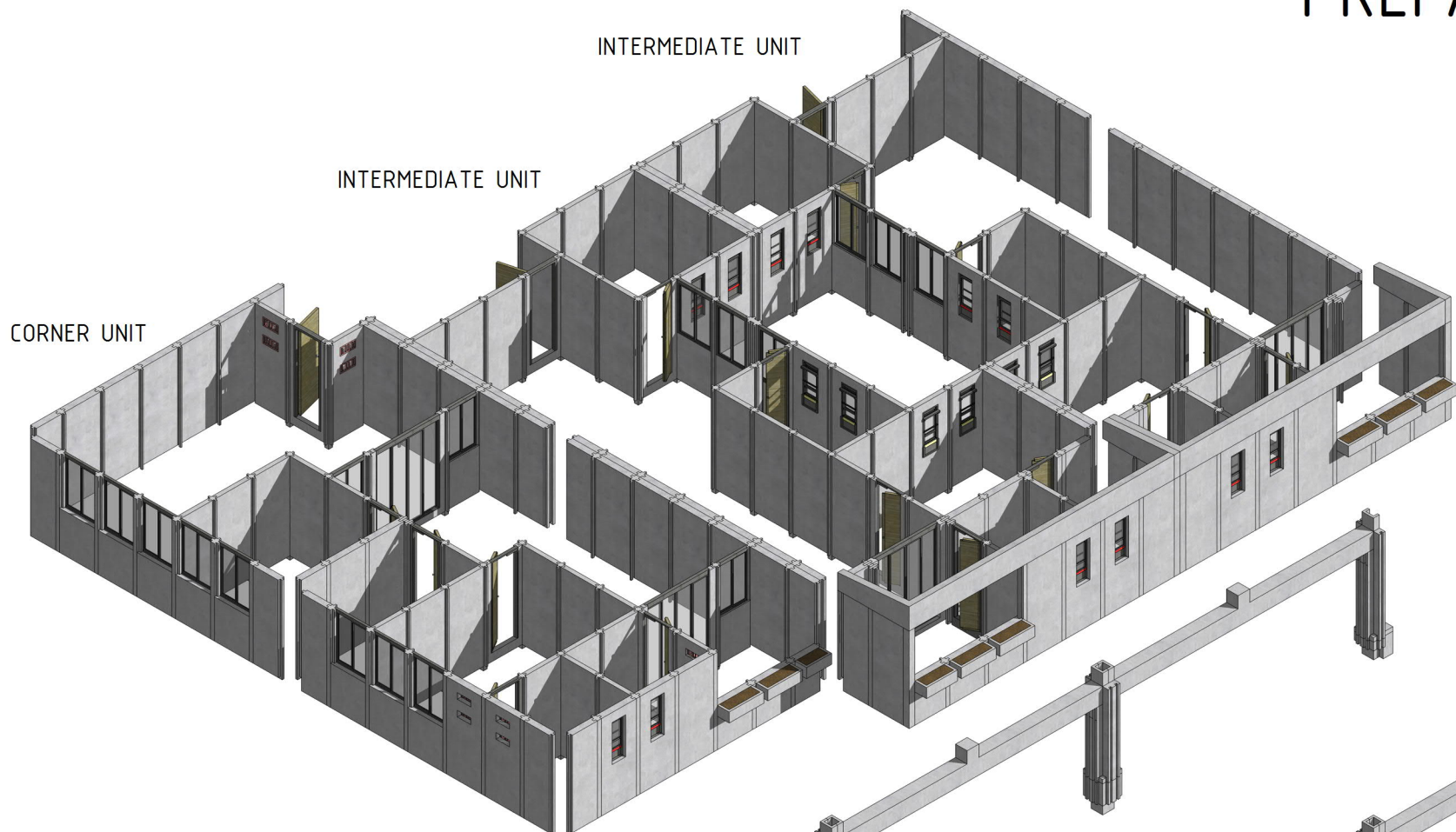
IN-SITU SMOOTH CONCRETE FLOOR
WITH FLOOR FINISH
DEPENDING ON SPACE ACTIVITY
AND USAGE



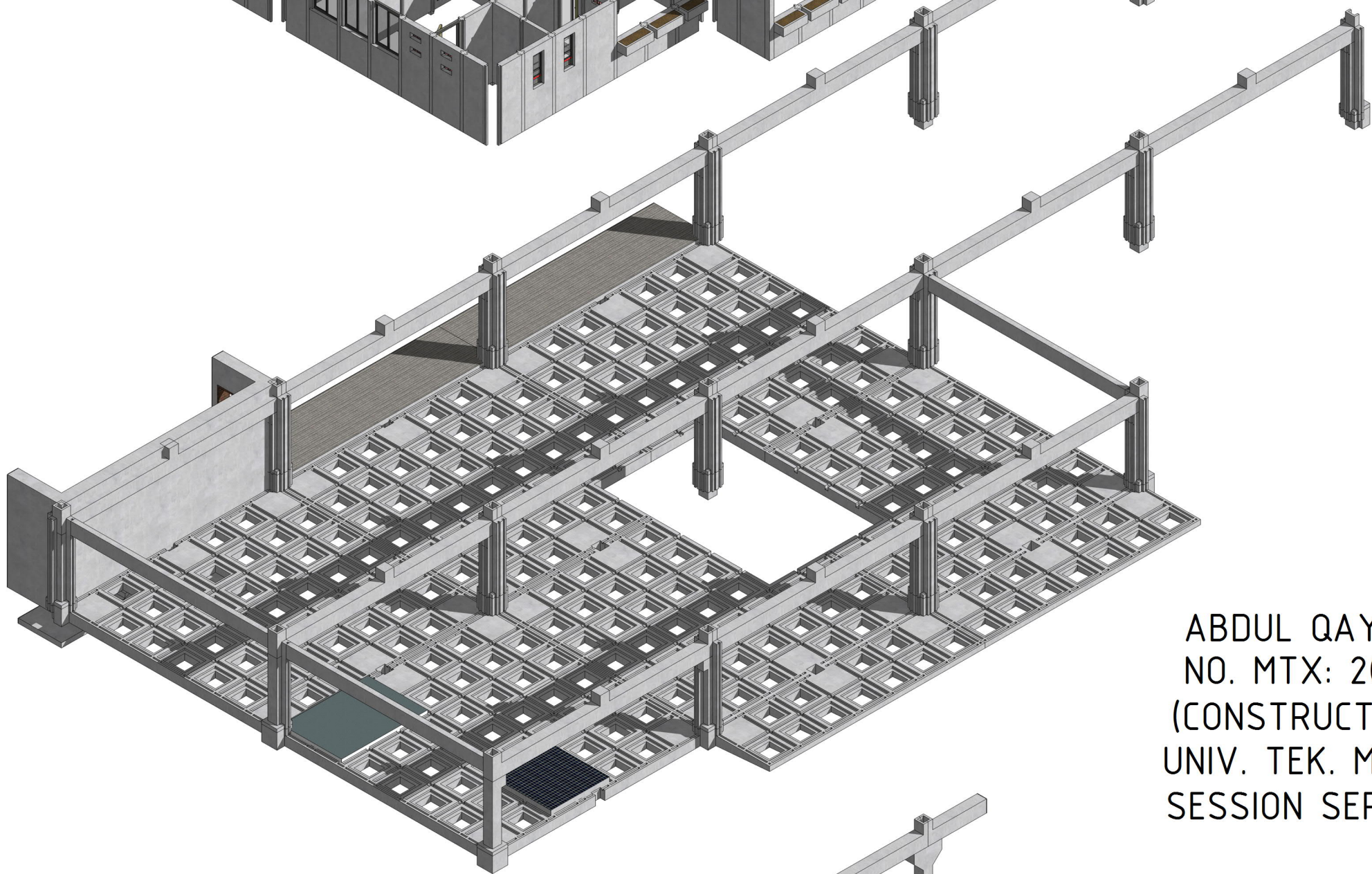
C H E S S

PREFABRICATED BUILDING
SYSTEM

INDUSTRIALISED
ENCLOSURE SYSTEM

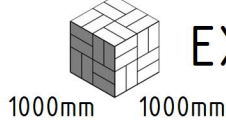


STRUCTURE SLAB
AND SUBSEQUENT
COLUMNS AND BEAMS
ON FIRST FLOOR AND ABOVE



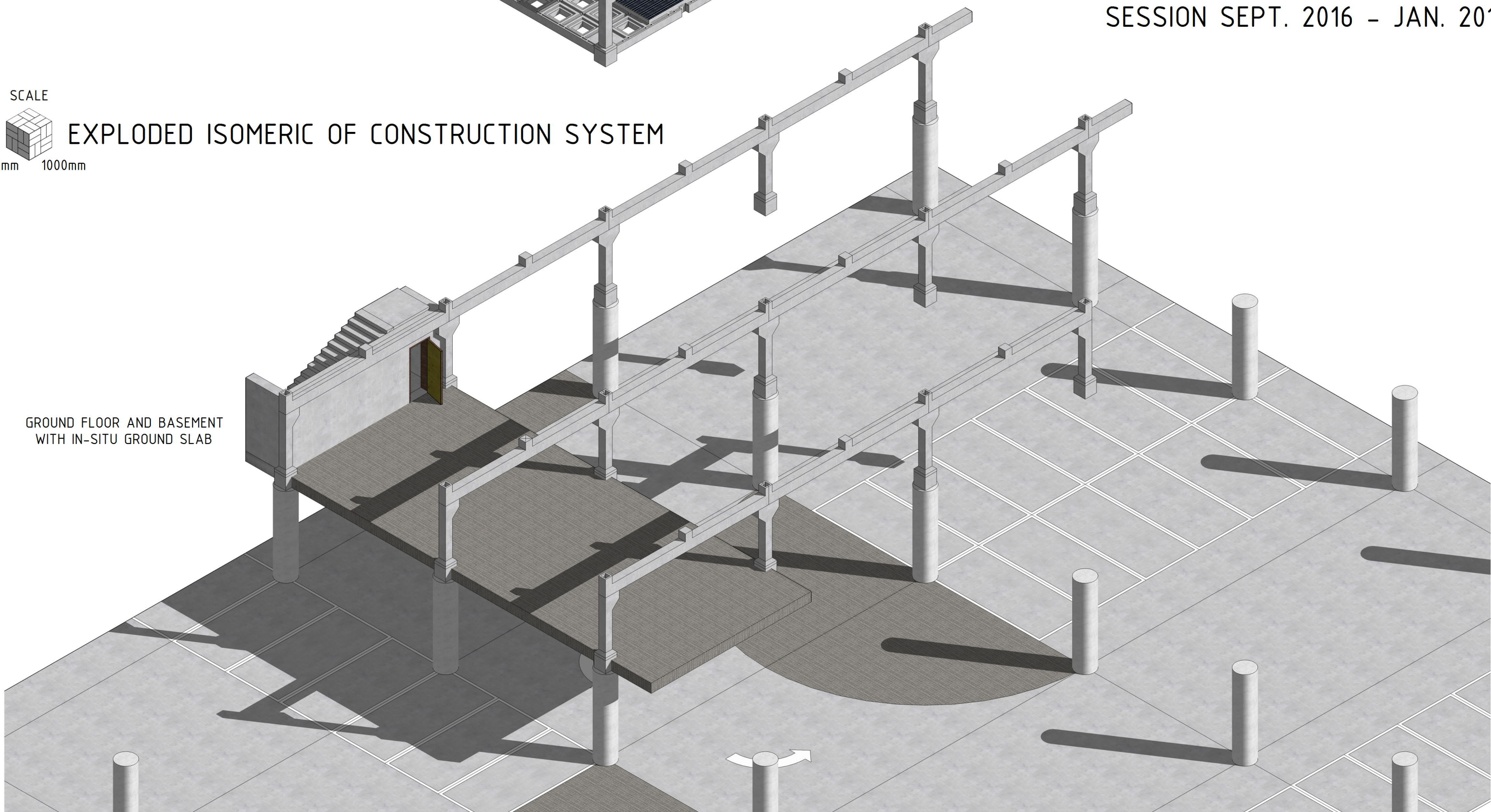
ABDUL QAYYUM BIN ABD MUIS
NO. MTX: 2012866698 · AAR651
(CONSTRUCTION TECHNOLOGY V)
UNIV. TEK. MARA, PUNCAK ALAM
SESSION SEPT. 2016 – JAN. 2017

SCALE

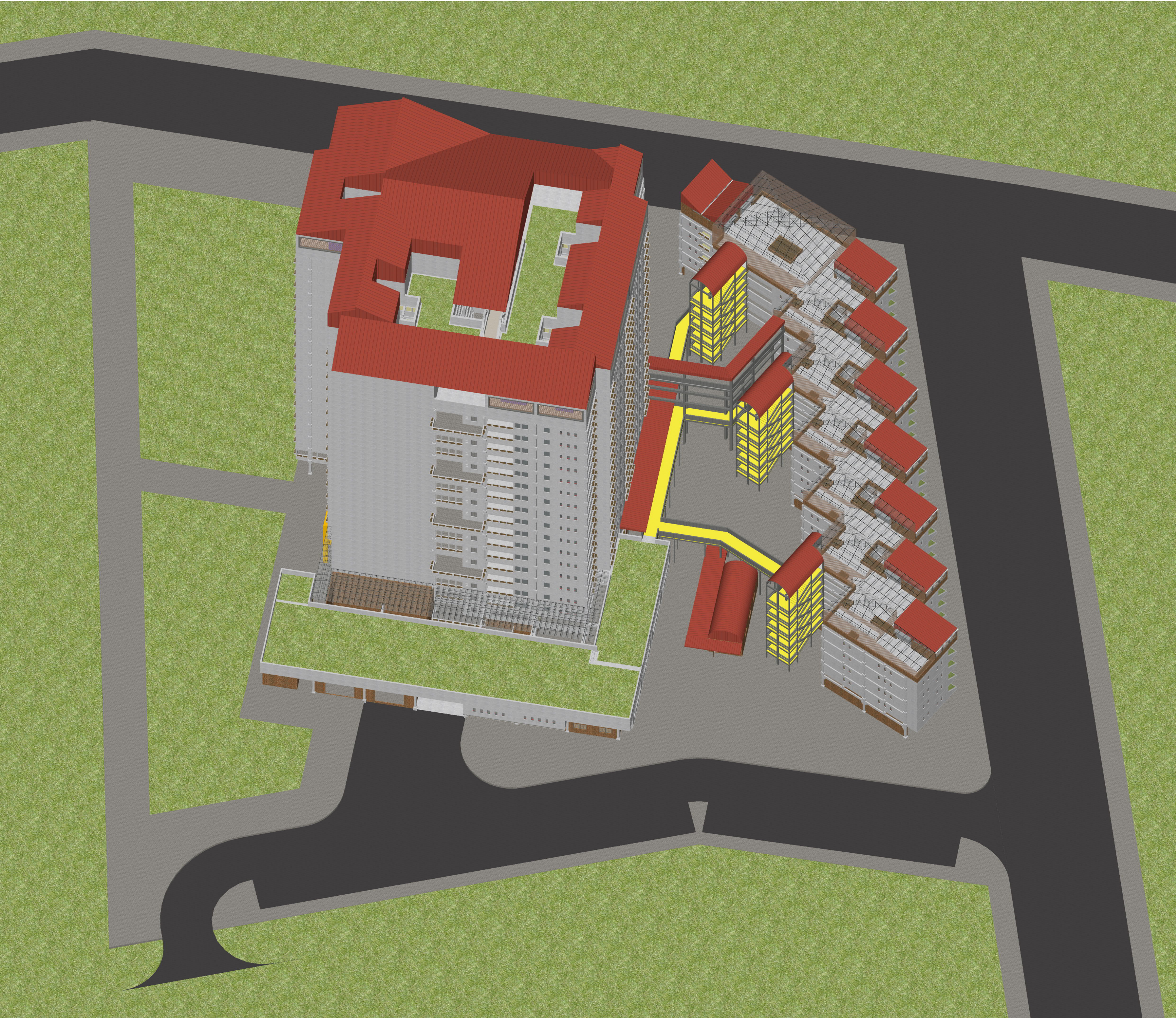


EXPLODED ISOMERIC OF CONSTRUCTION SYSTEM

GROUND FLOOR AND BASEMENT
WITH IN-SITU GROUND SLAB

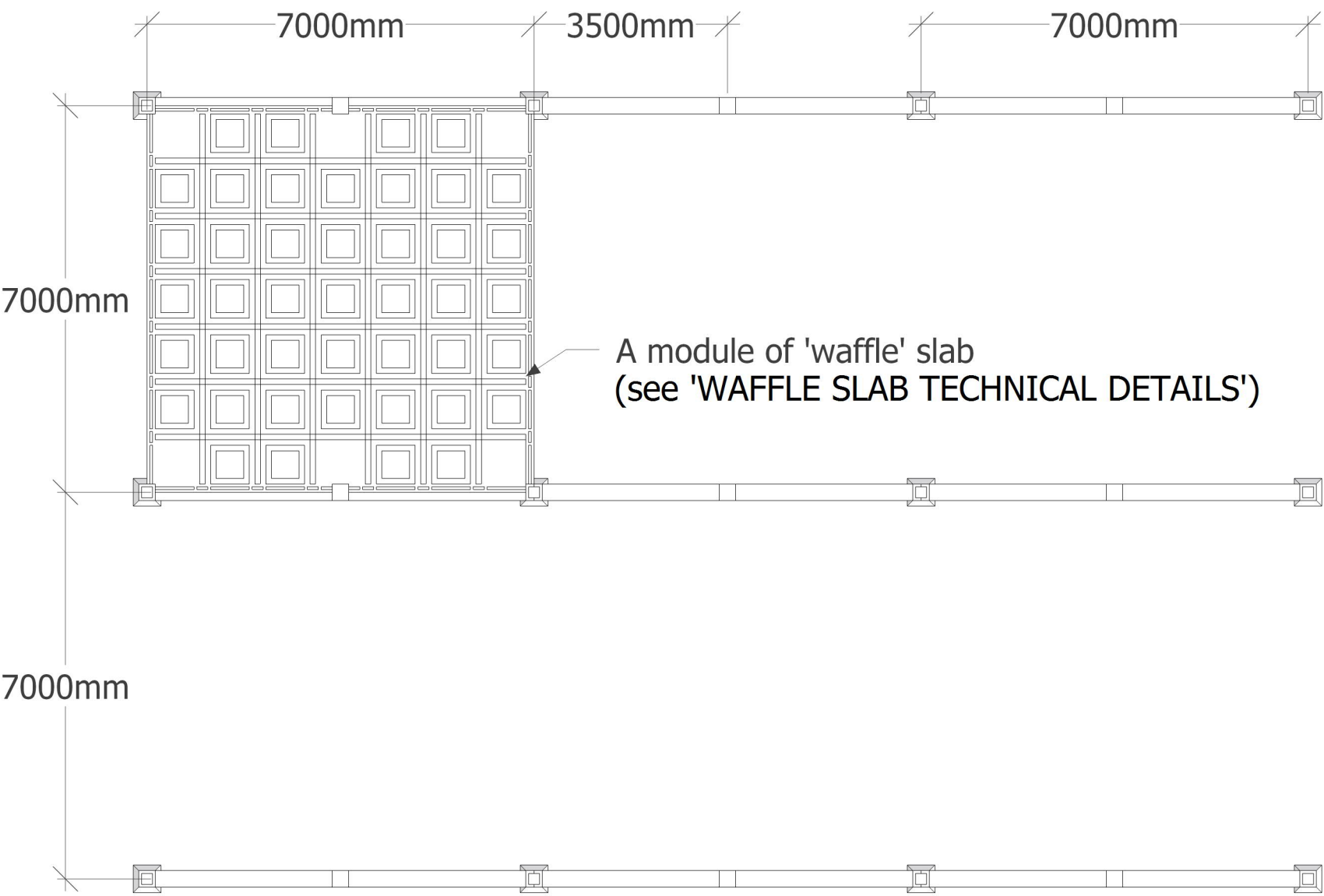


ACKNOWLEDGMENT

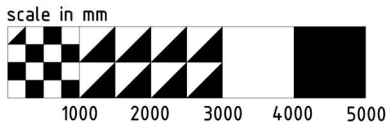
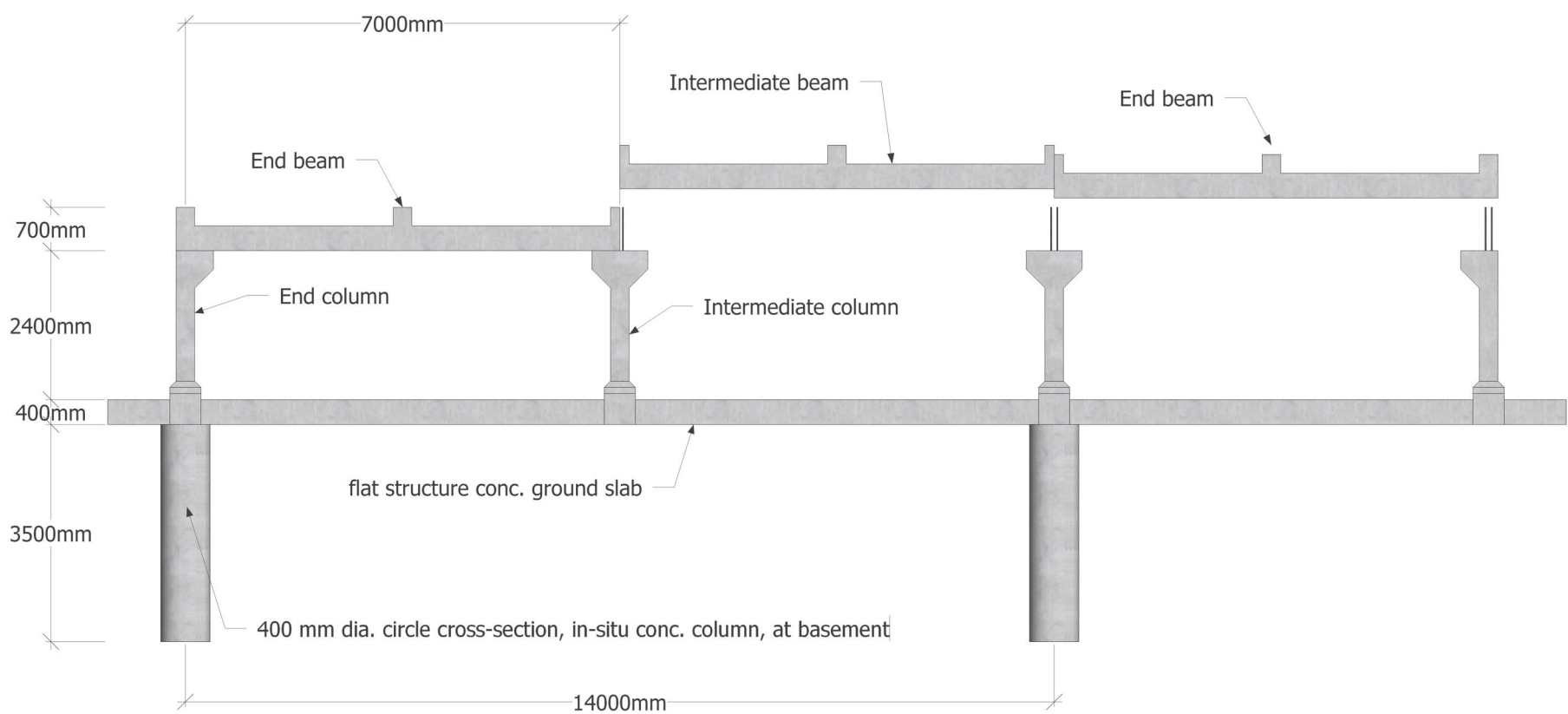


This building system has been used in the design of an affordable housing cluster for Malay and Melanau settlers along the riverside of Sarawak River in Darul Hana, Kuching, Sarawak during March - July 2016 session with Pn. Nakiah as the studio leader.

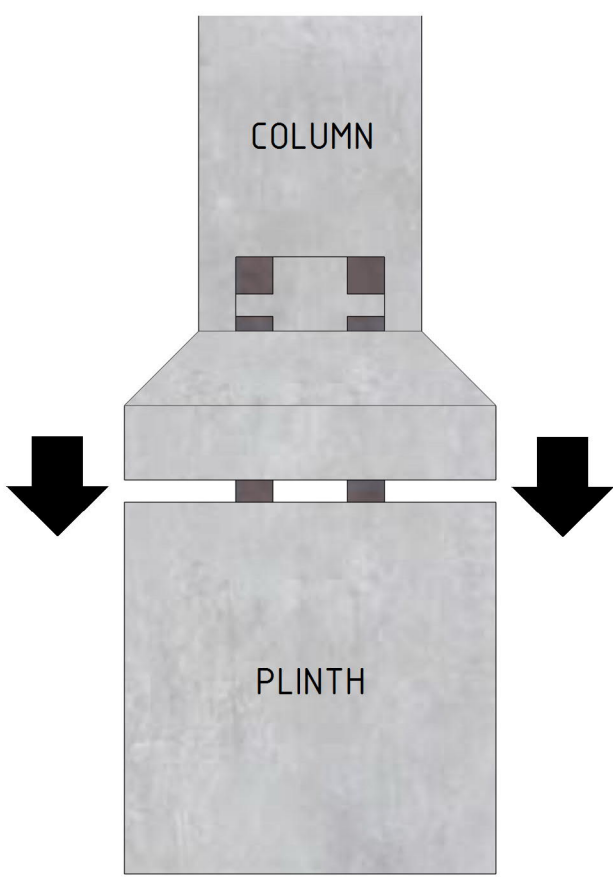
MEASUREMENTS



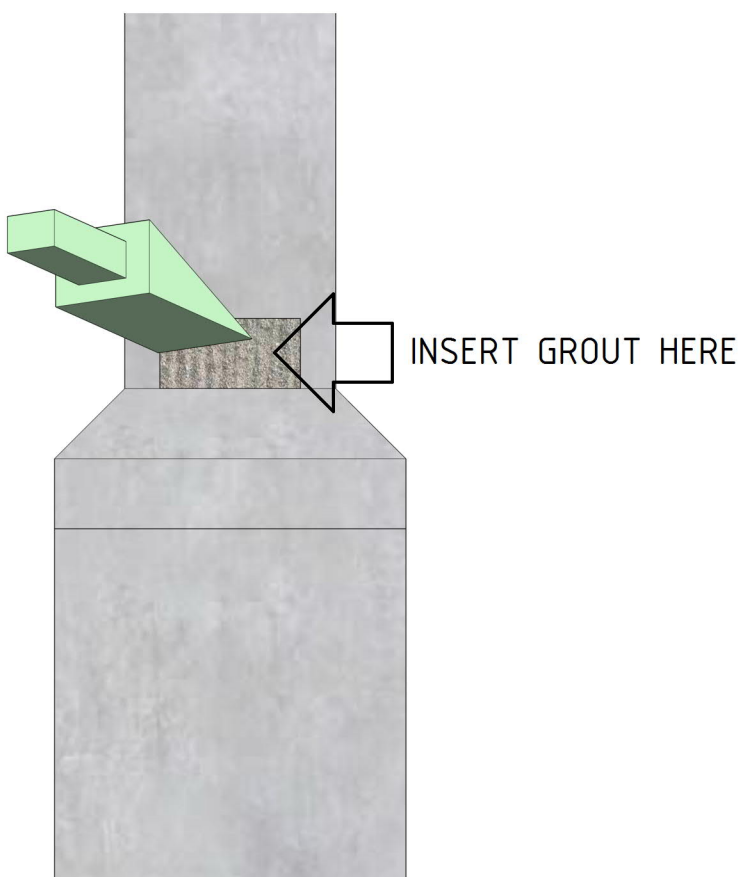
Minimum length: 14m total, 2 nos. 7m end beams
Maximum length: unlimited



PROCEDURE

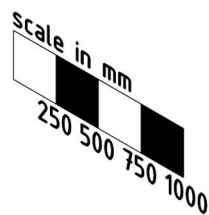
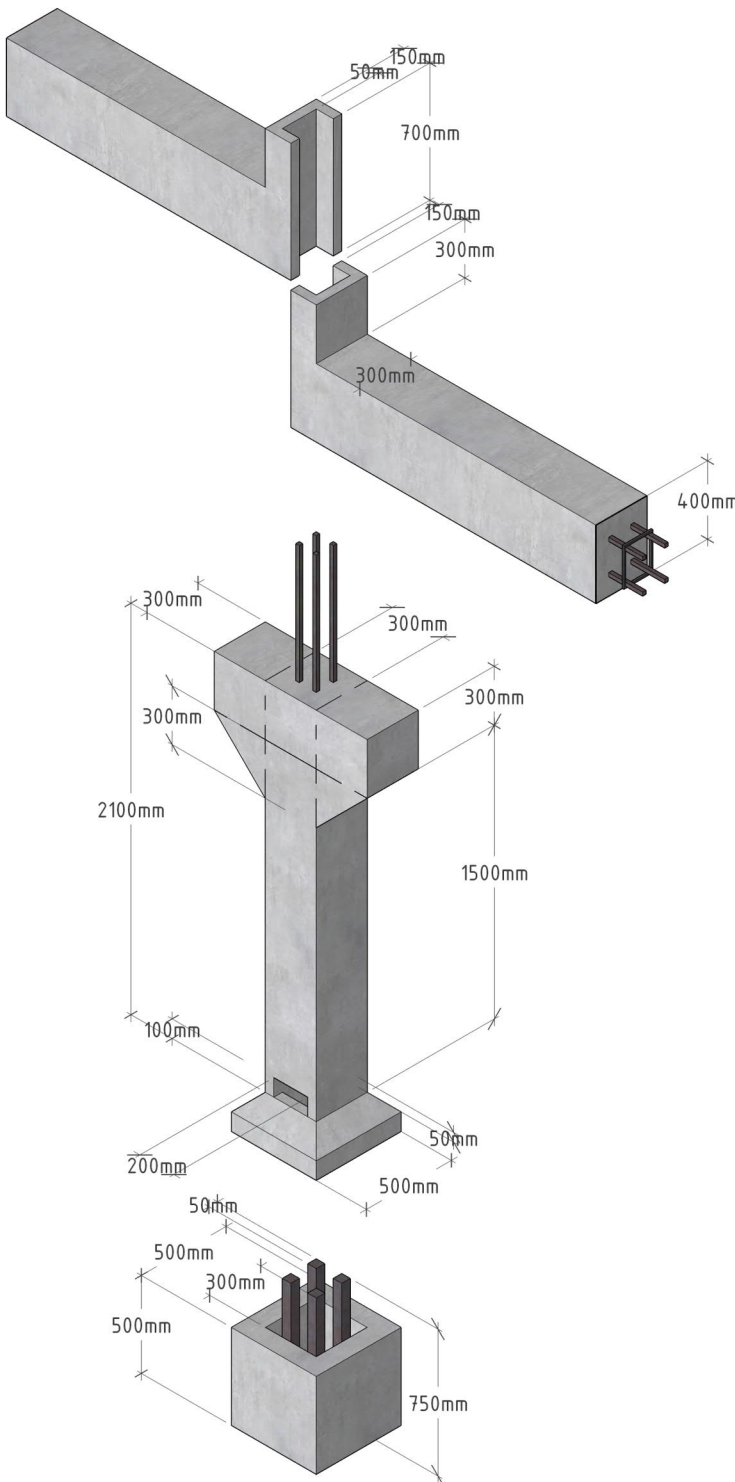
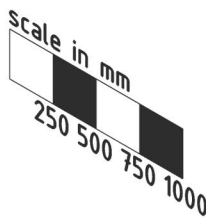
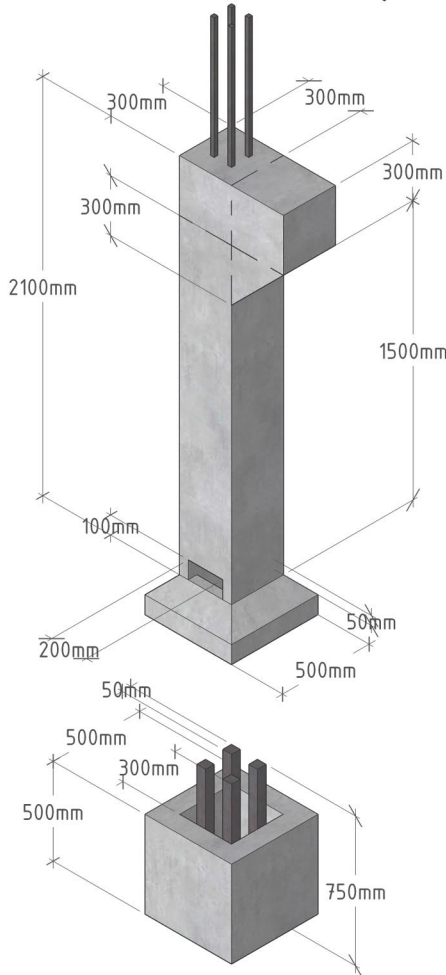
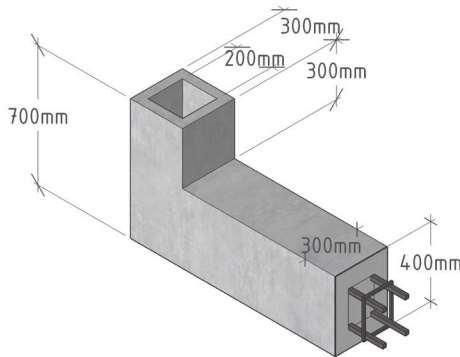
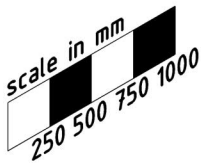
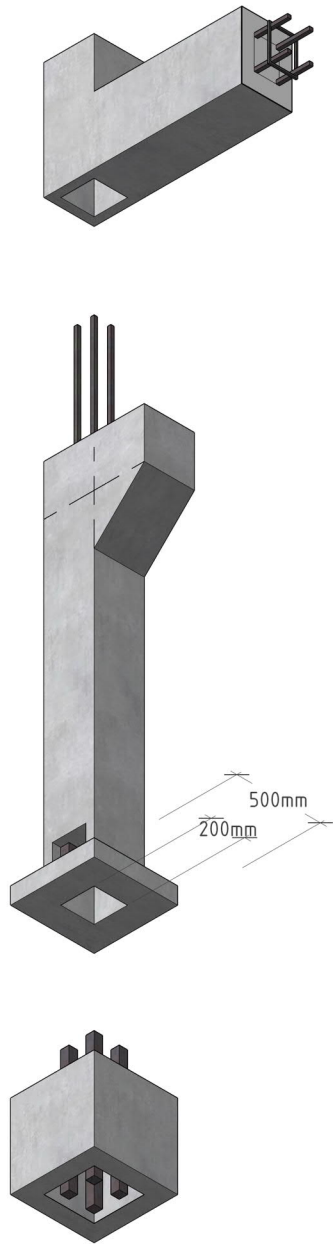


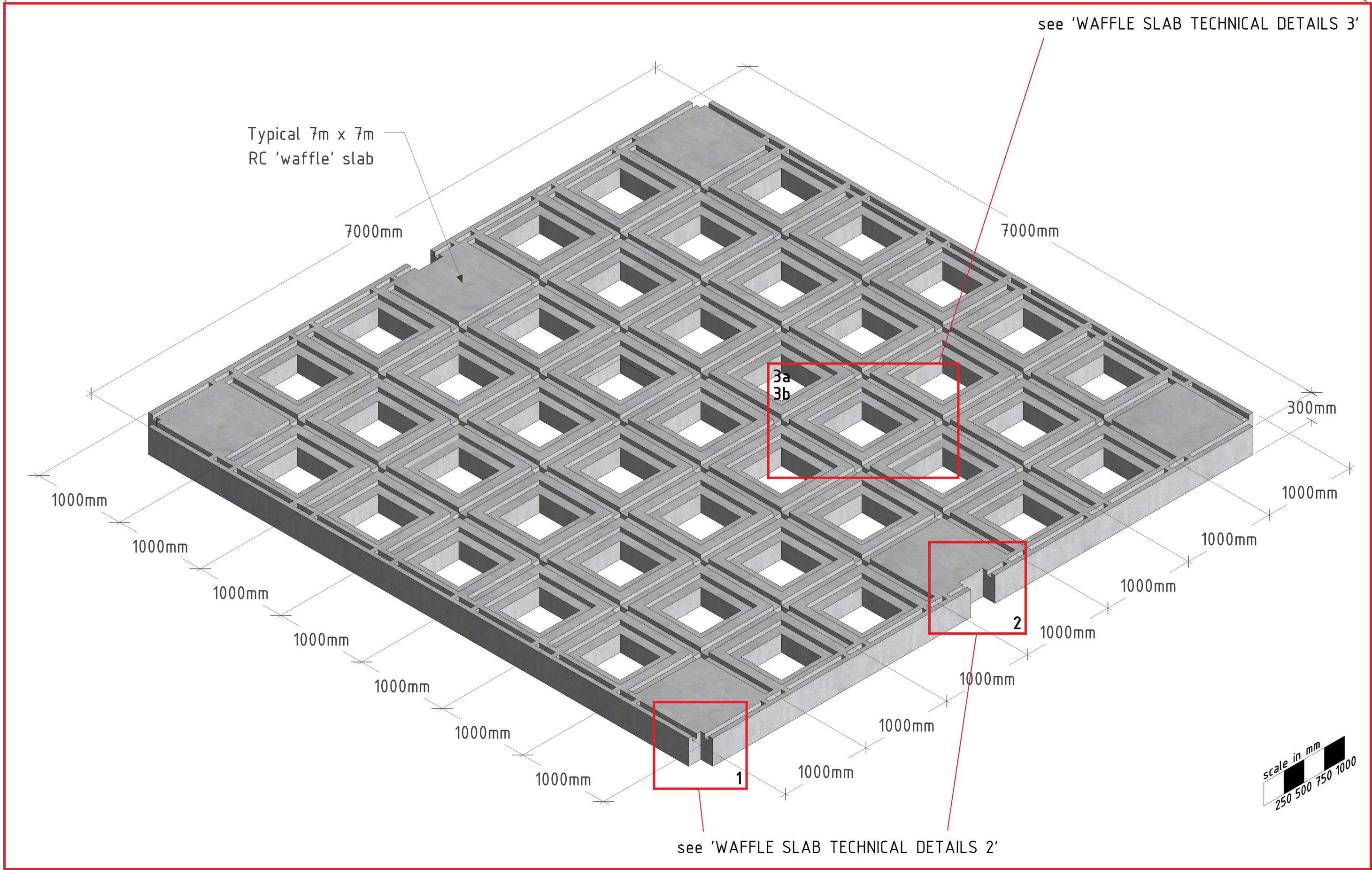
1. INSERT THE COLUMN ONTO A SPECIALLY DESIGNED PLINTH

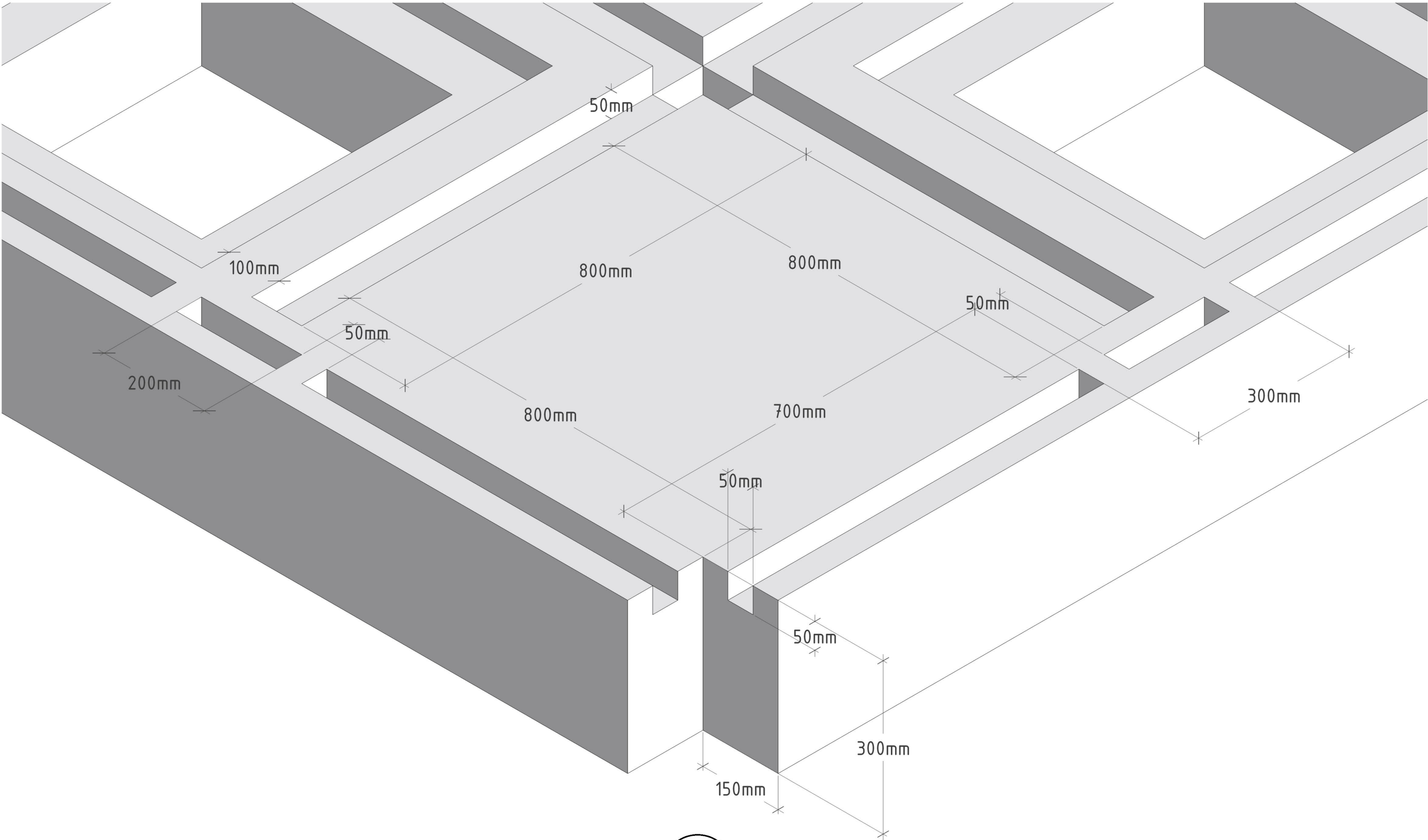


2. INSERT GROUT INTO THE SPECIALLY DESIGNED HOLE TO FILL IN EXPOSED REBARS

POST-AND-BEAM TECHNICAL DETAILS



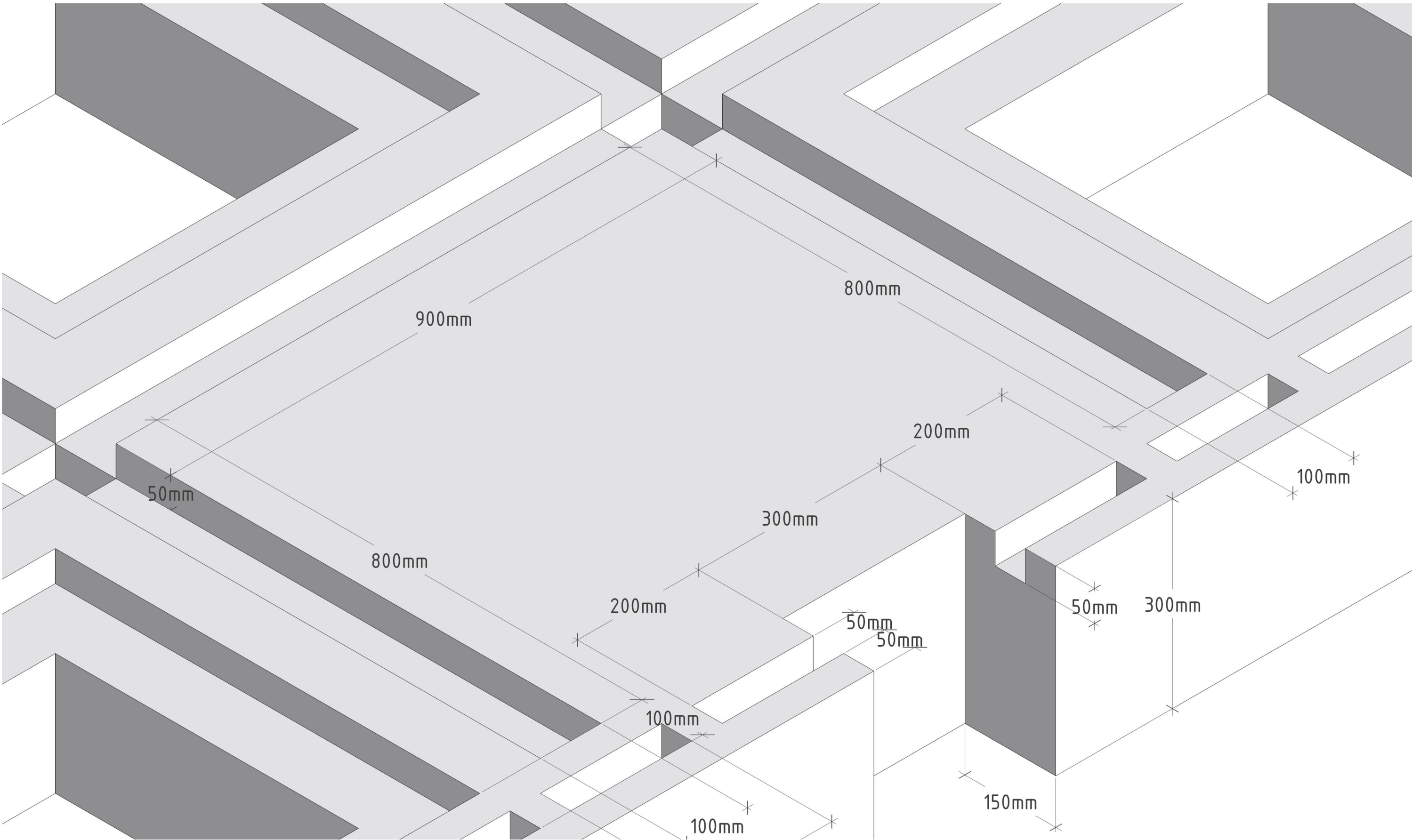


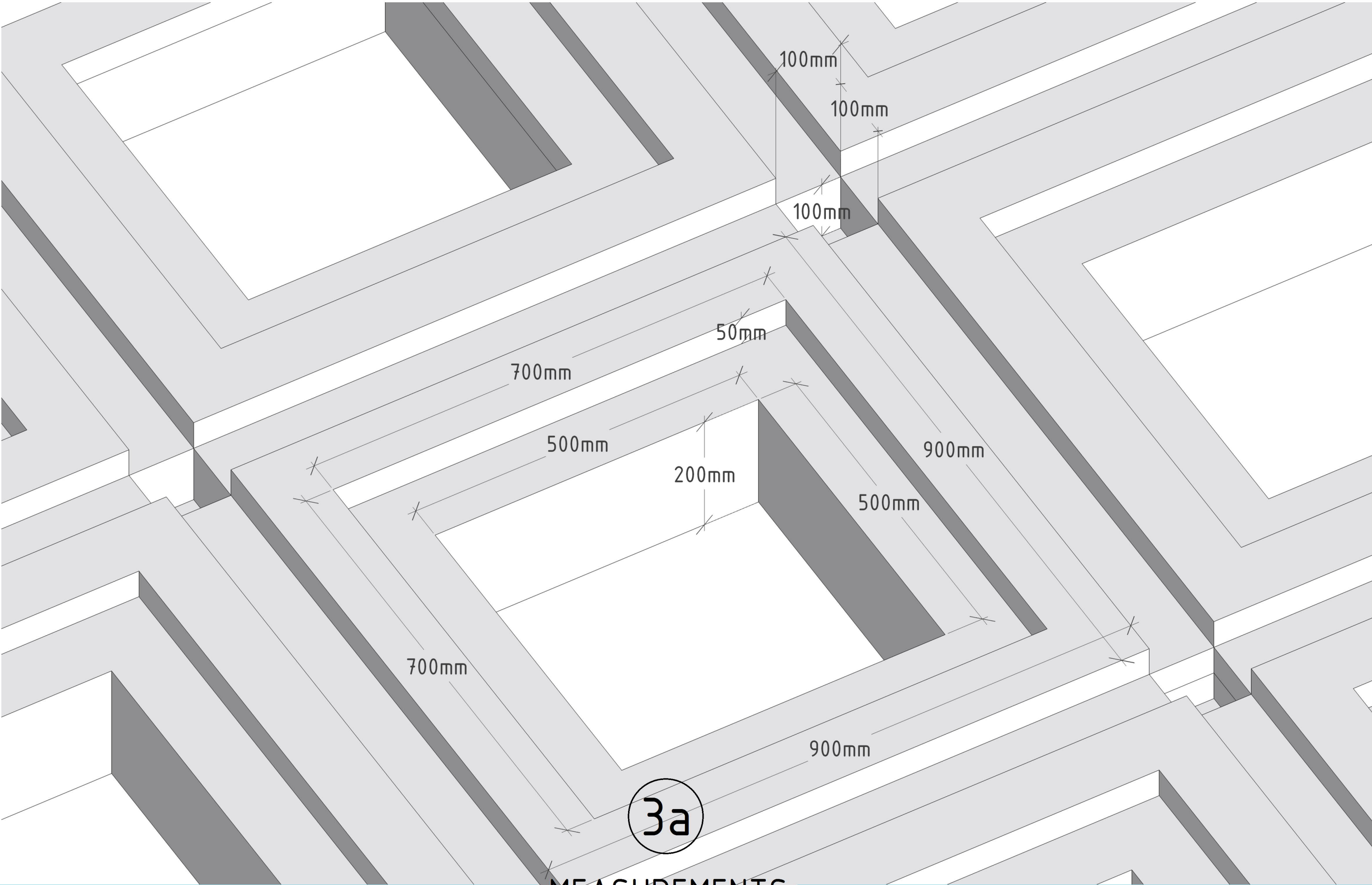


1

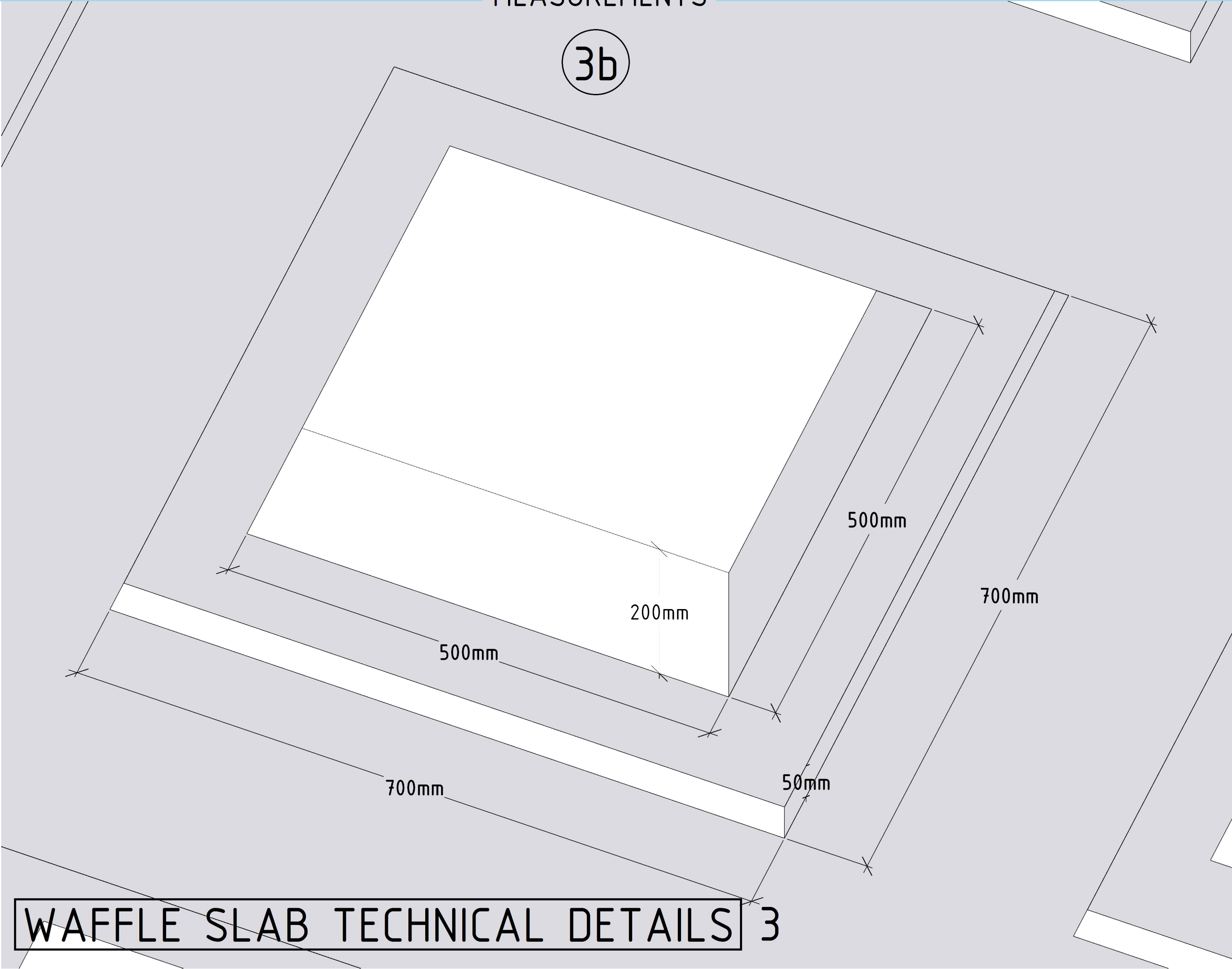
MEASUREMENTS

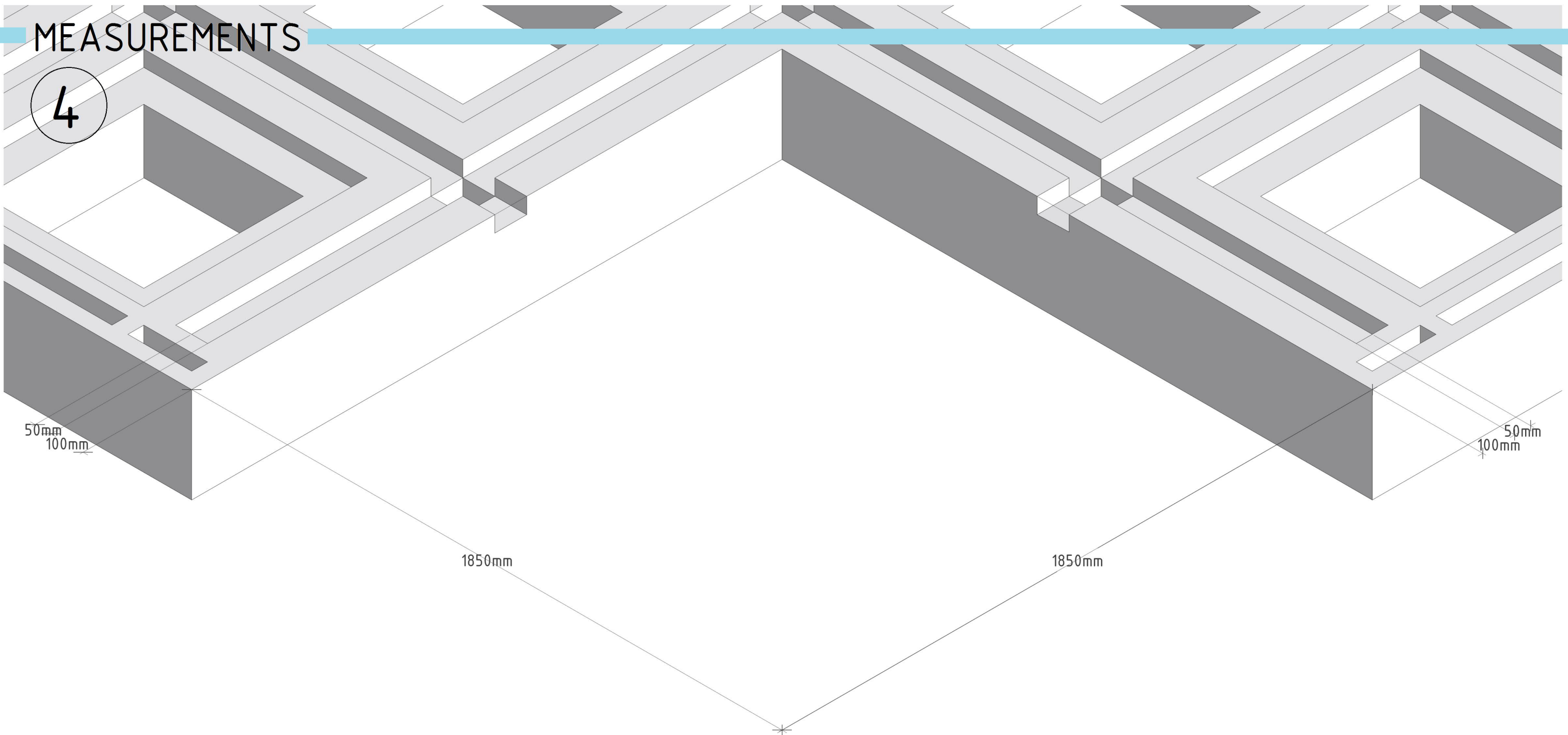
2





MEASUREMENTS

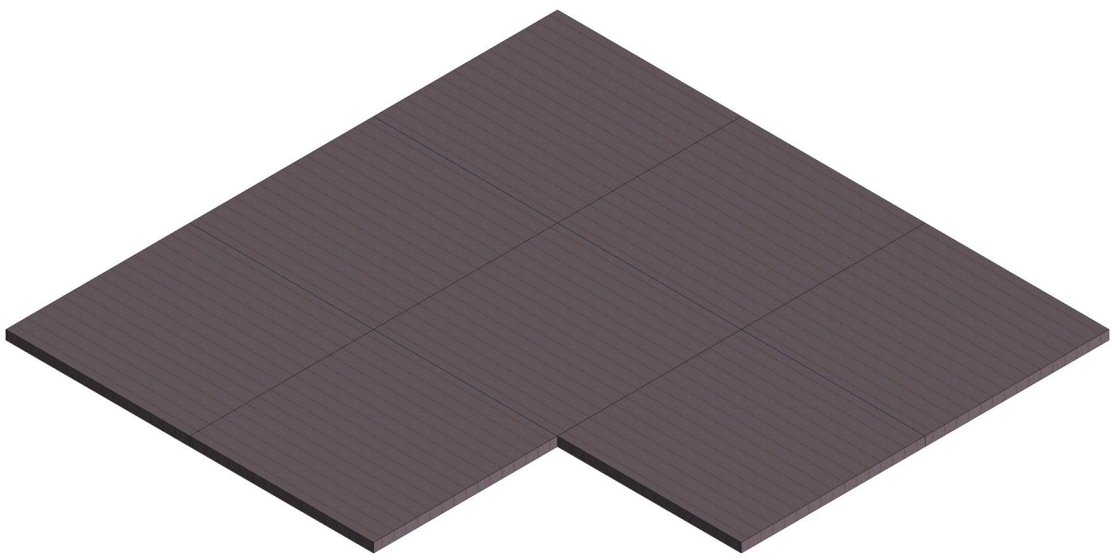




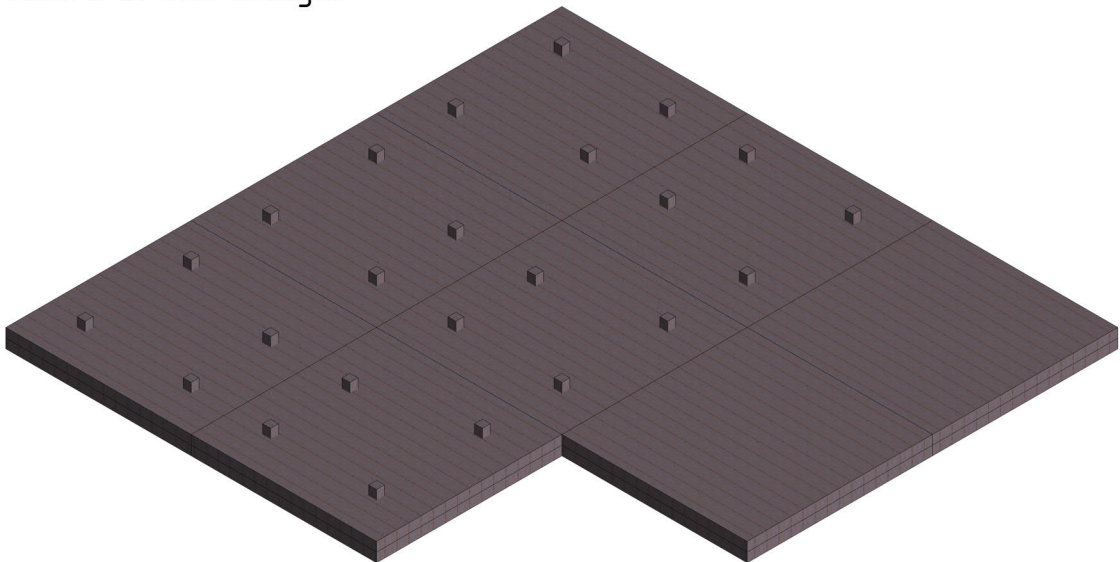
WAFFLE SLAB TECHNICAL DETAILS 4

CONSTRUCTION PROCEDURE 1

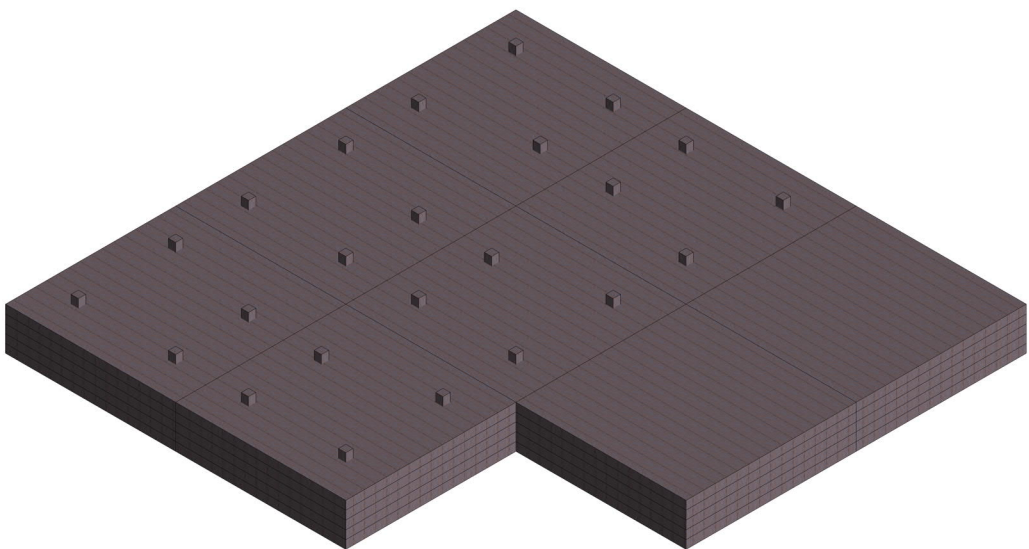
1. Hydraulic jacks are placed first. Slabs are cast in-situ.



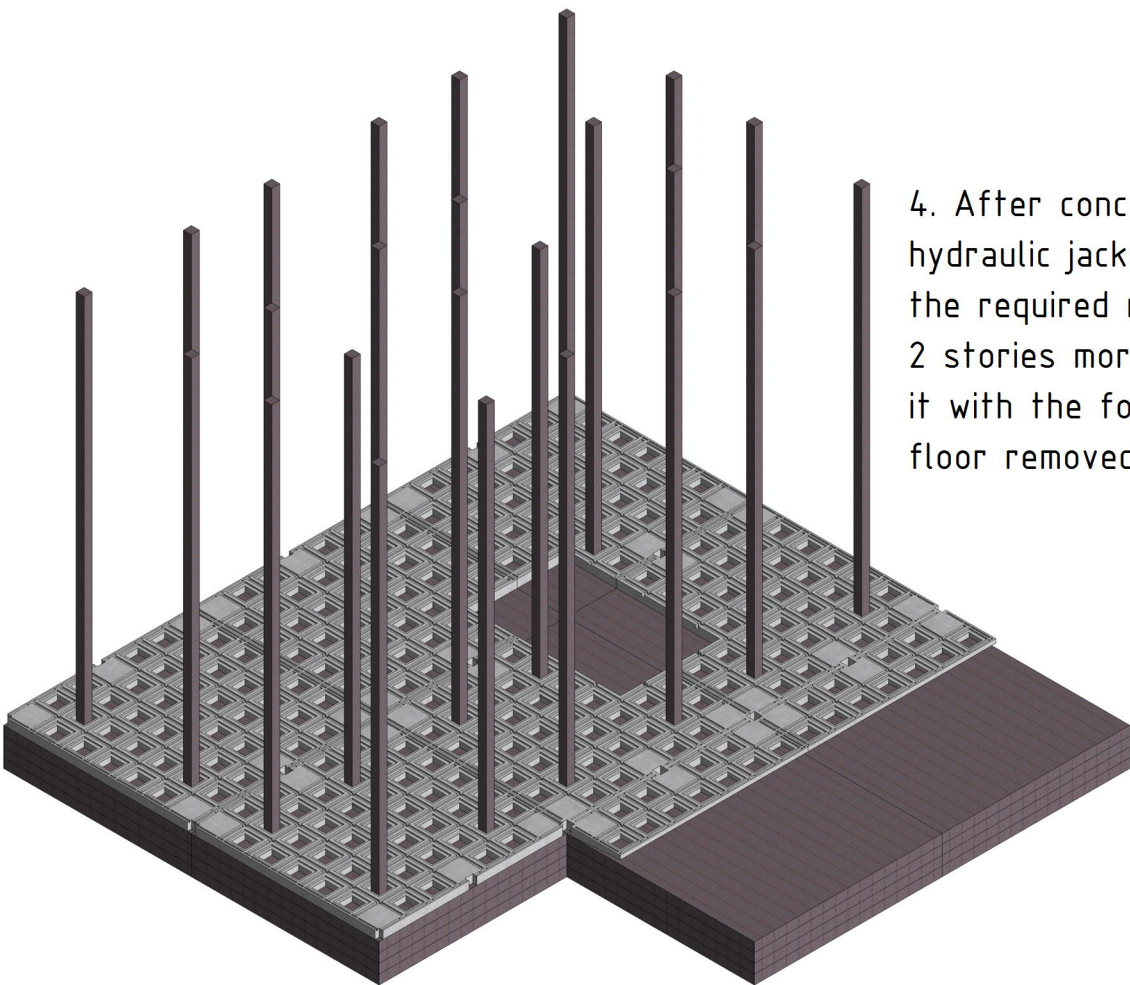
2. Hydraulic jacks are raised while more slabs are cast, depending on the number of floors in the design.



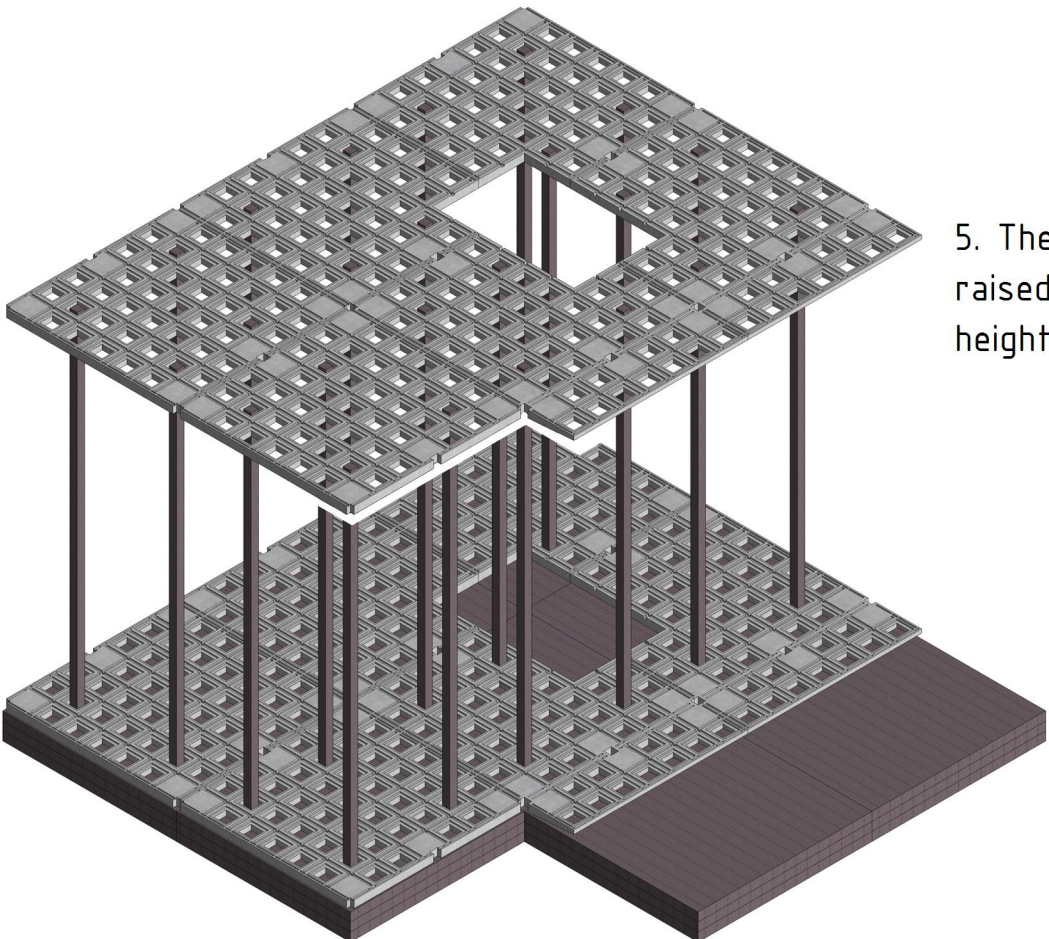
3. Continue raising hydraulic jacks and concrete until the desired number of floors are reached. Then, wait for the concrete to be cured.



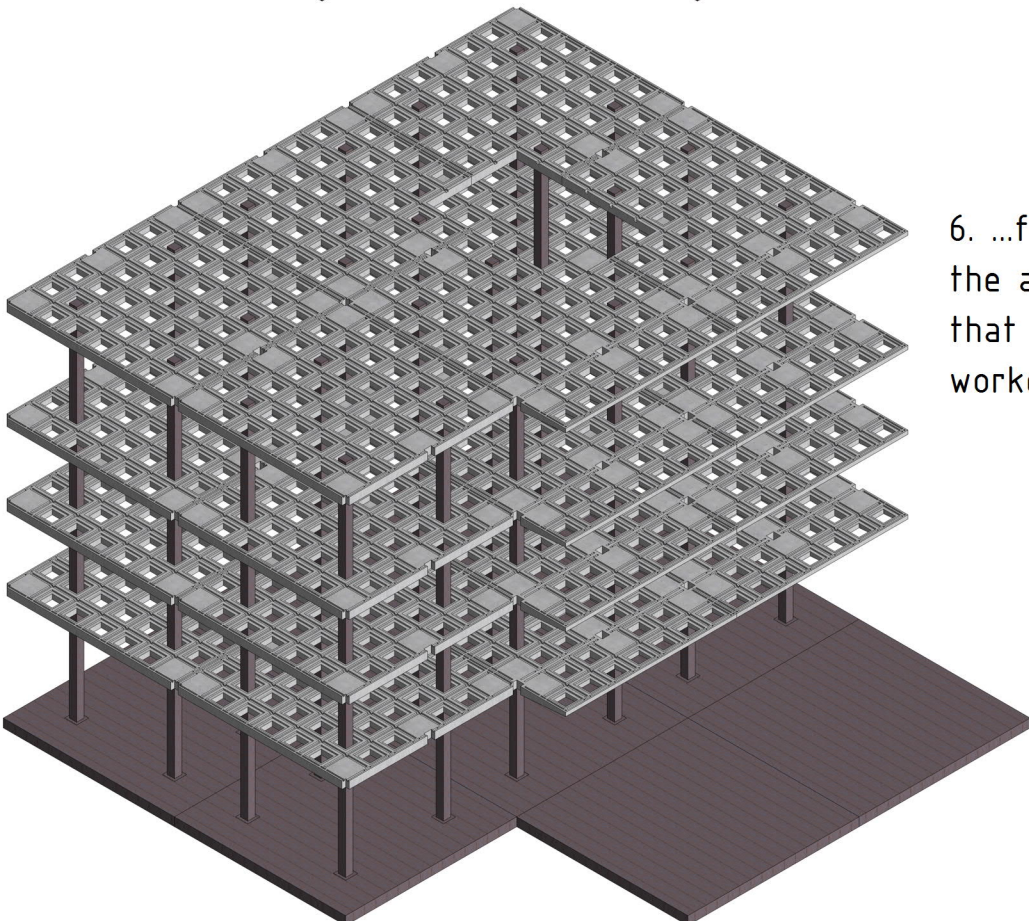
4. After concrete is cured, the hydraulic jacks are raised up to the required number of floors + 2 stories more. This figure shows it with the formwork of topmost floor removed.



5. The topmost floor is raised to the maximum height that can be raised...



6. ...followed by others to the approximate height that is high enough for workers to stand well.



CONSTRUCTION PROCEDURE 2

7. The ground cover for formwork is removed, leaving ground exposed for the placement of plinth and columns.

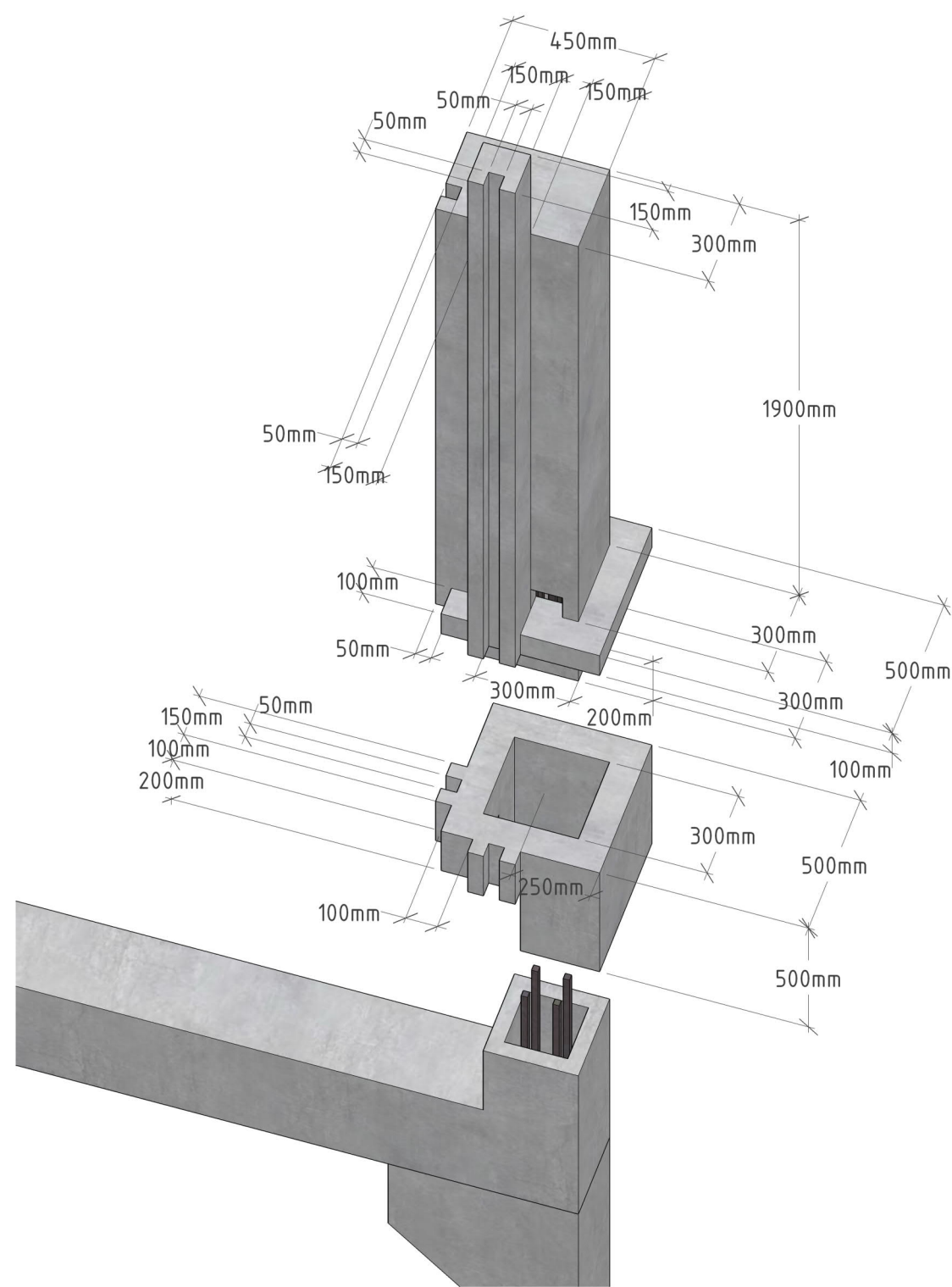
8. The plinth and columns of ground floor are placed. Beams are then placed...

9. ...and the first floor slabs are gradually placed on the beams.

10. Steps 8 and 9 are repeated for other floors...

11. ...until all slabs have been placed.

12. Remove the hydraulic jacks, and the structure is done.



1 START

2 PLACE PLINTH

3 INSERT GROUT

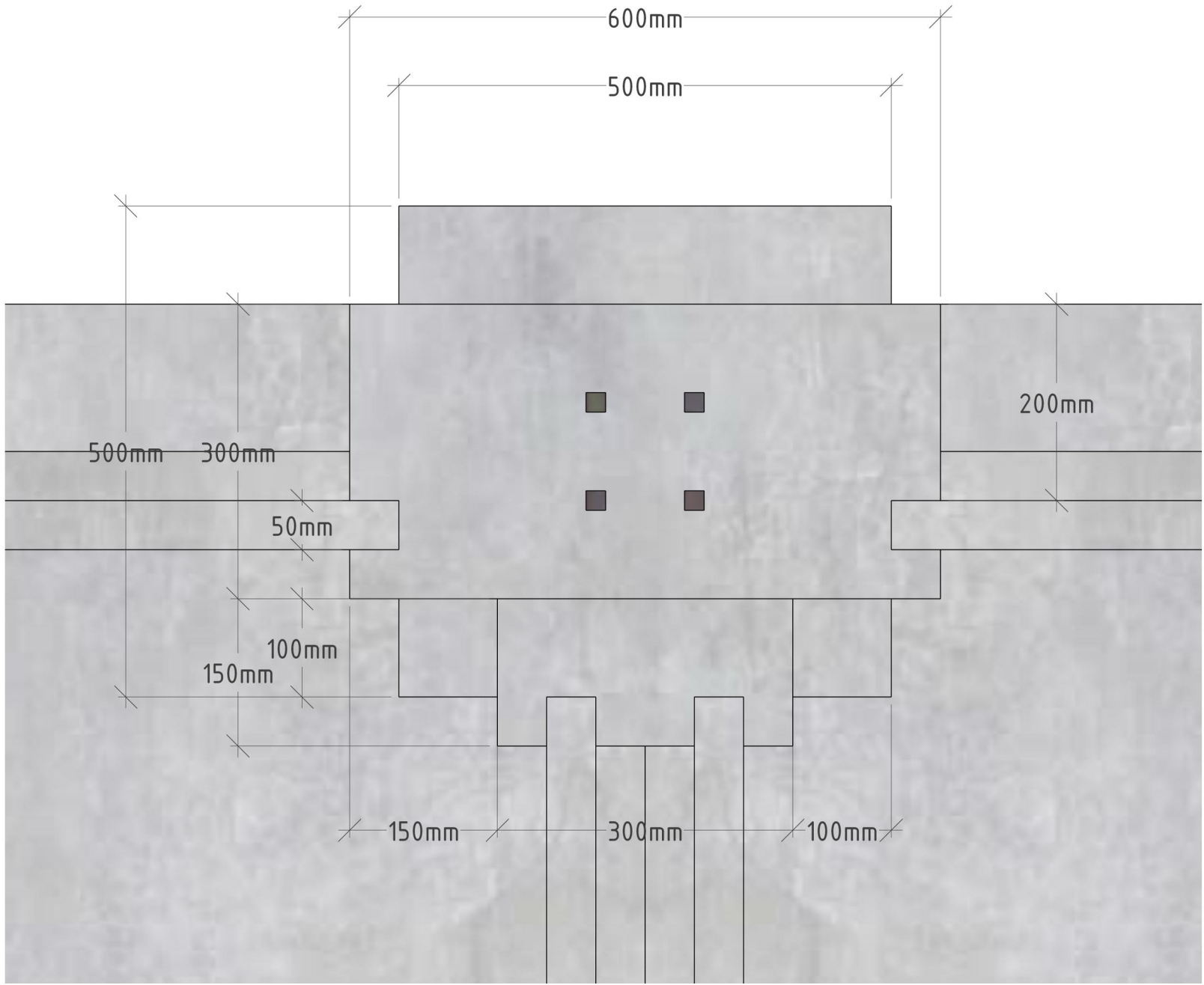
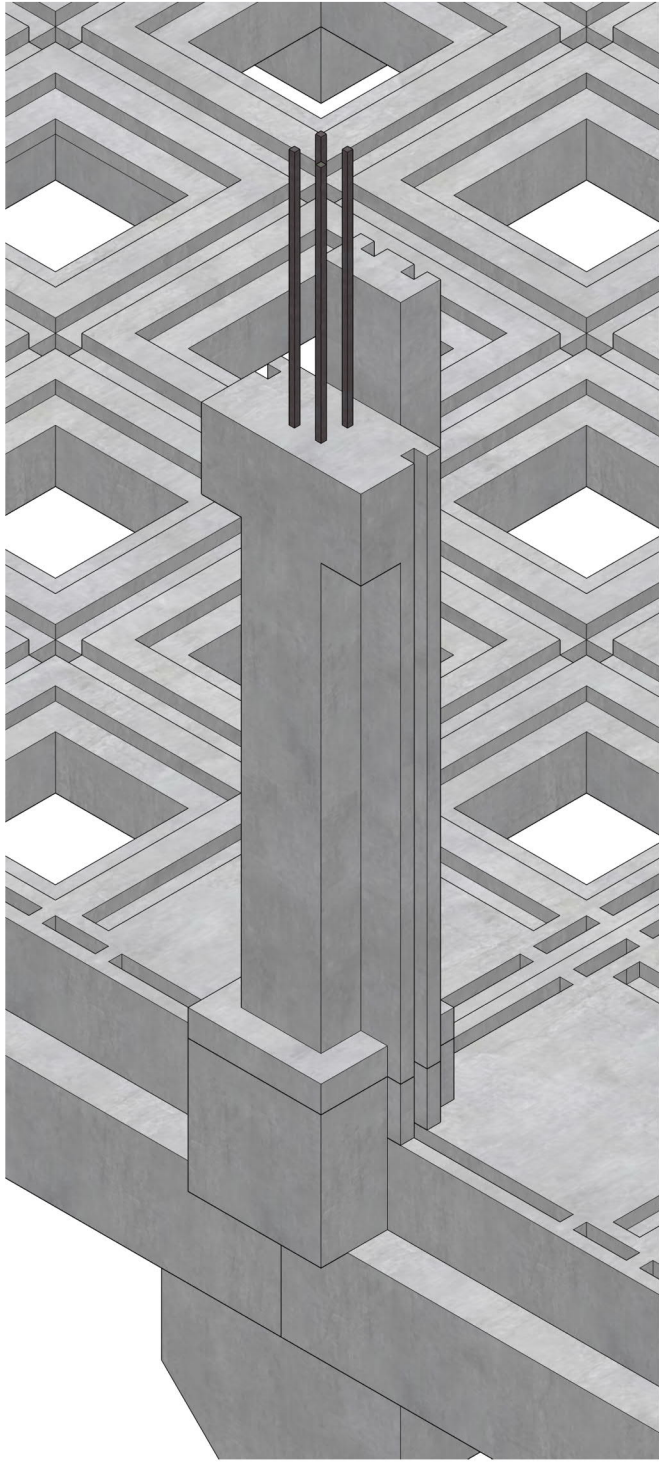
4 PLACE COLUMN

5 REMOVE EXCESS GROUT

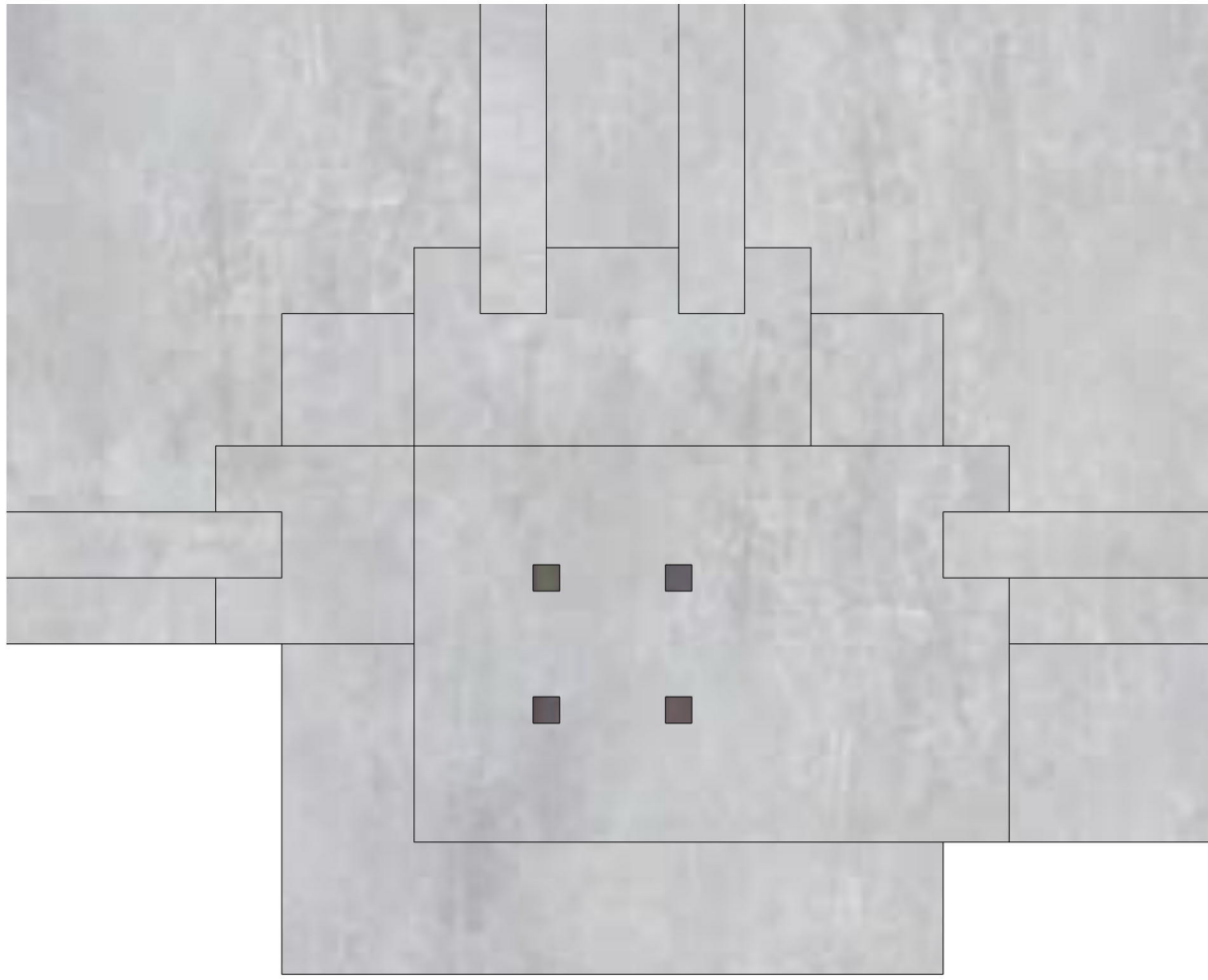
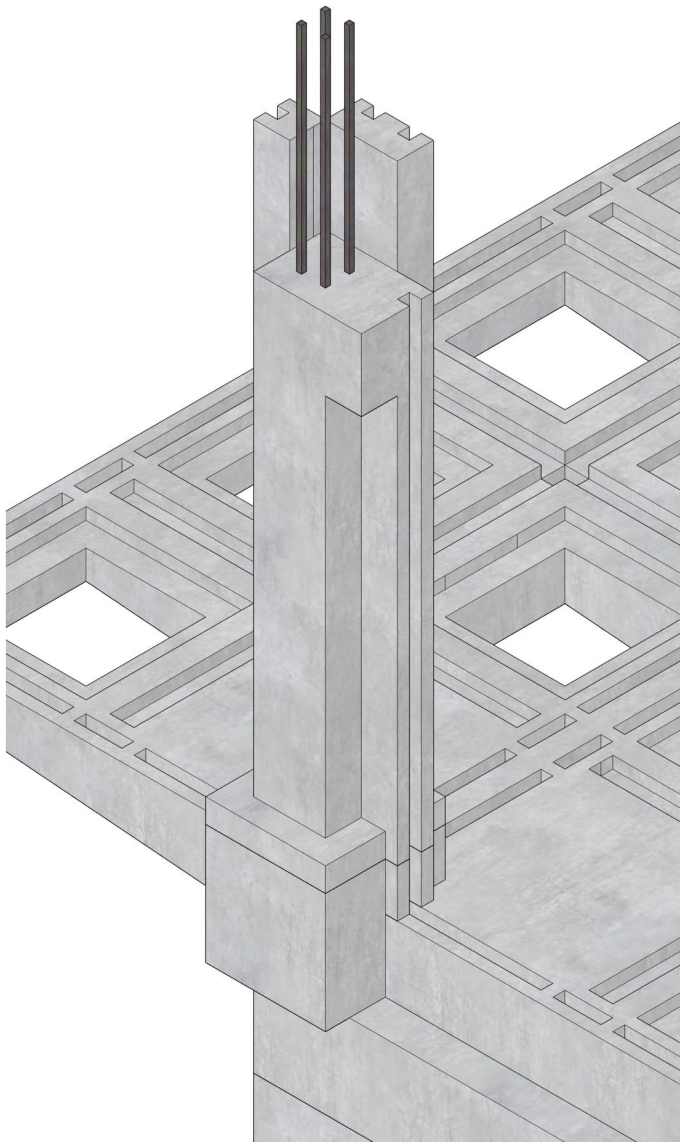
6 FINISH

Figure 1 shows four views of a structural column joint. The top row contains two isometric views of the column and beam connection, showing reinforcement bars. The bottom row contains two plan views of the column cross-section, showing dimensions: 500mm, 150mm, 100mm, 50mm, 400mm, 300mm, 450mm, and 500mm.

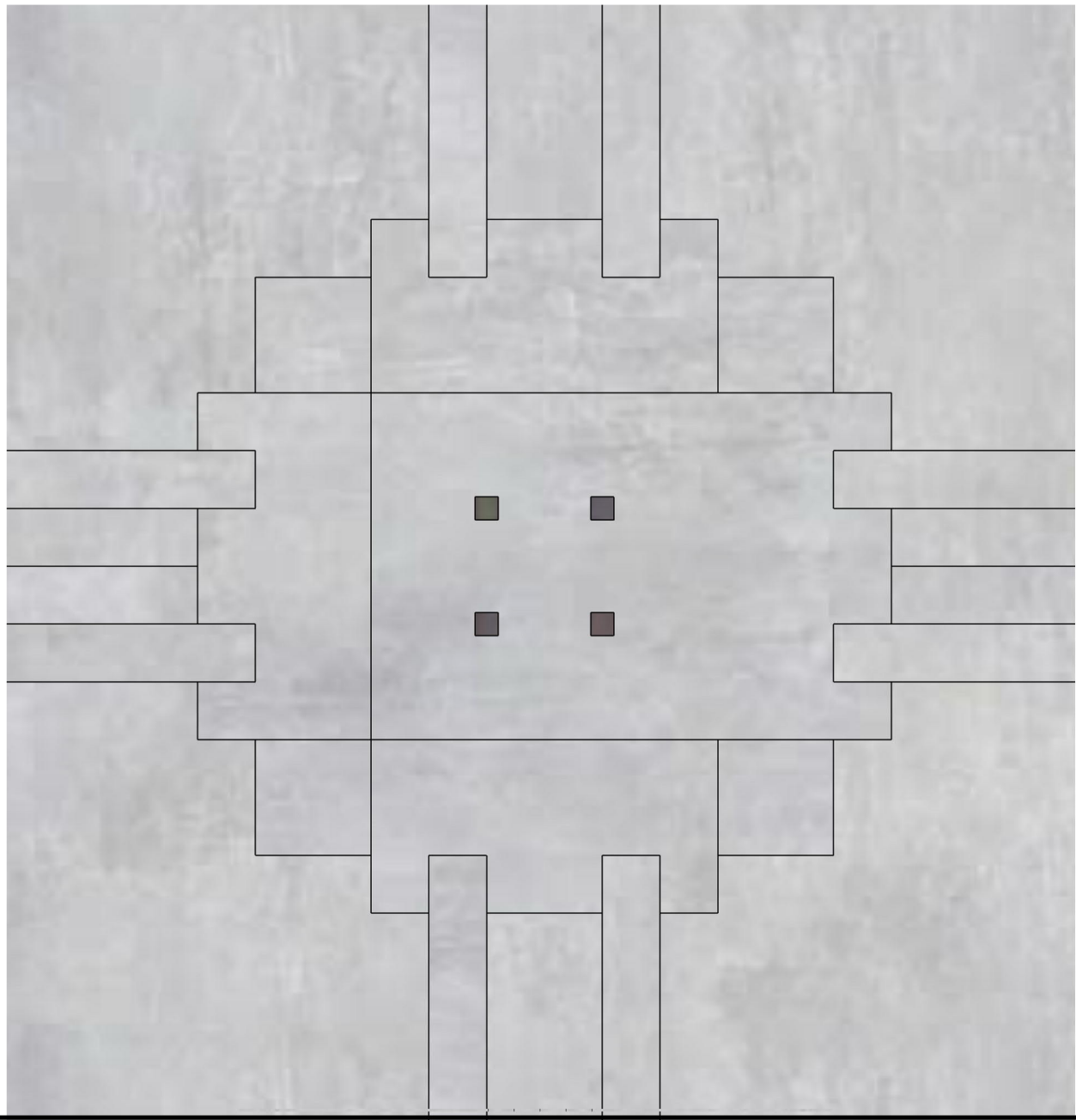
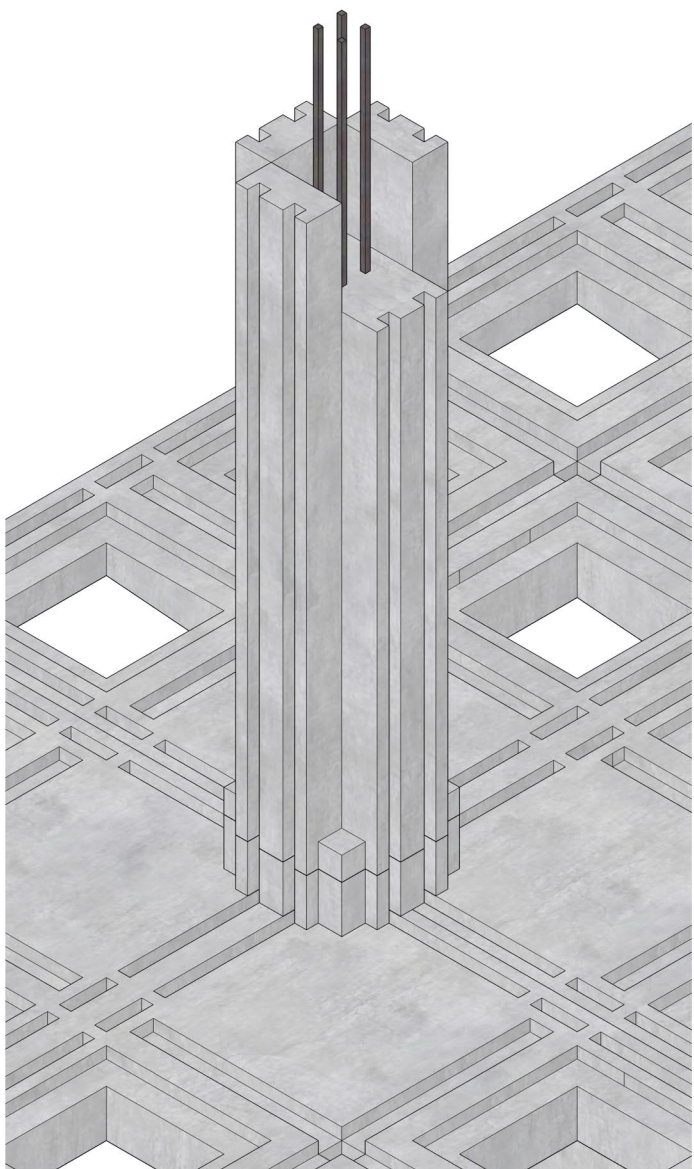
⑤

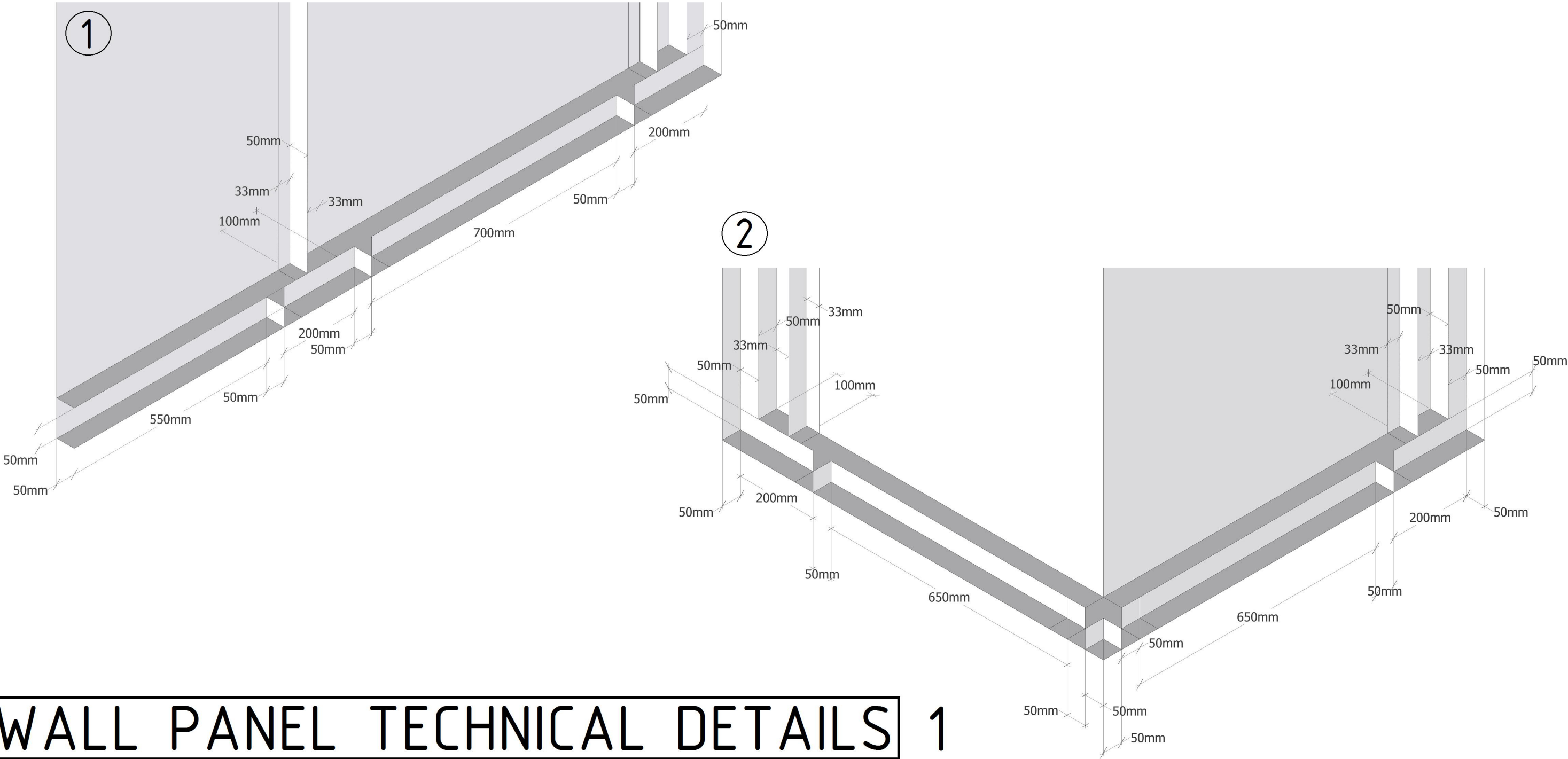
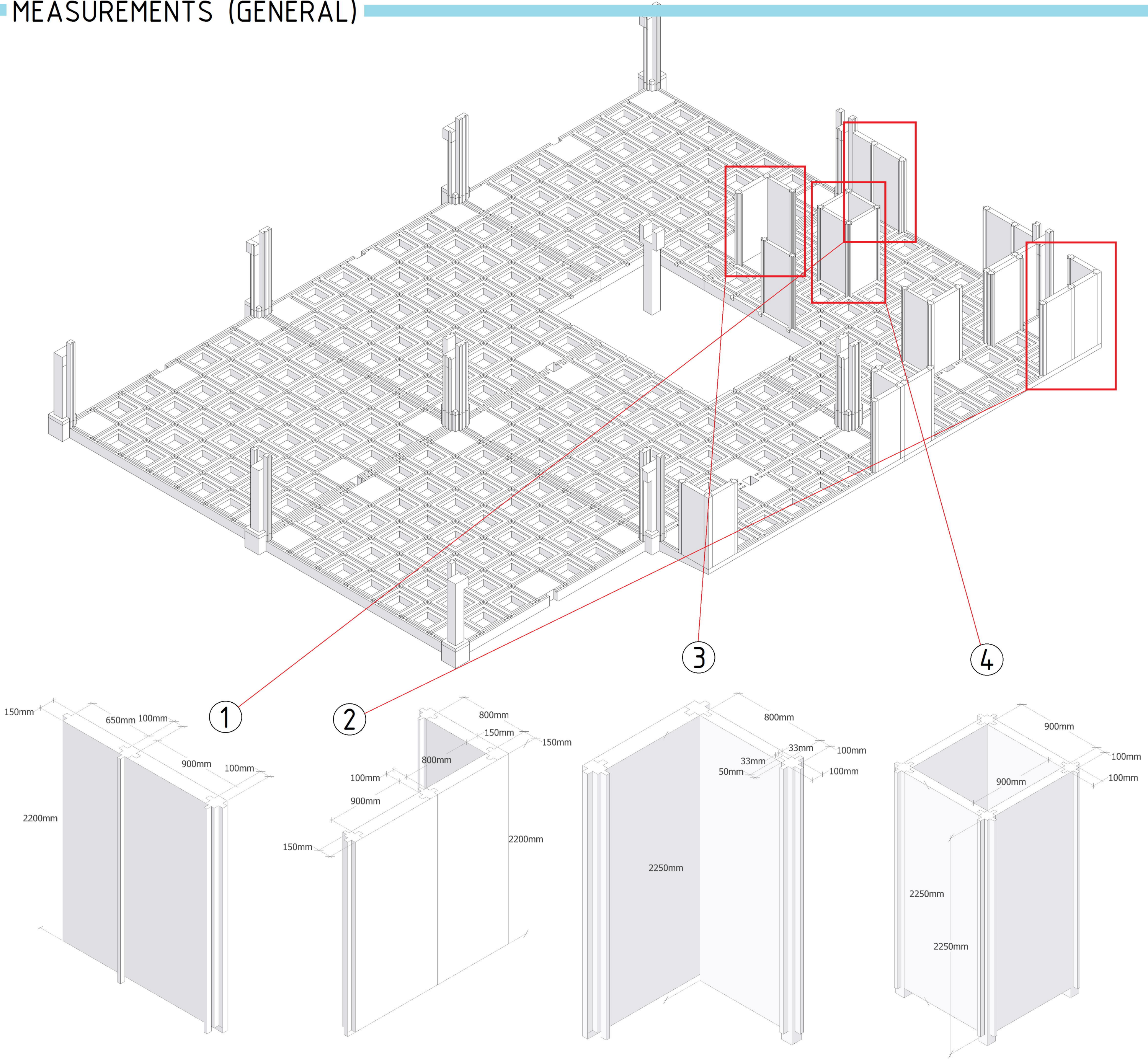


⑥

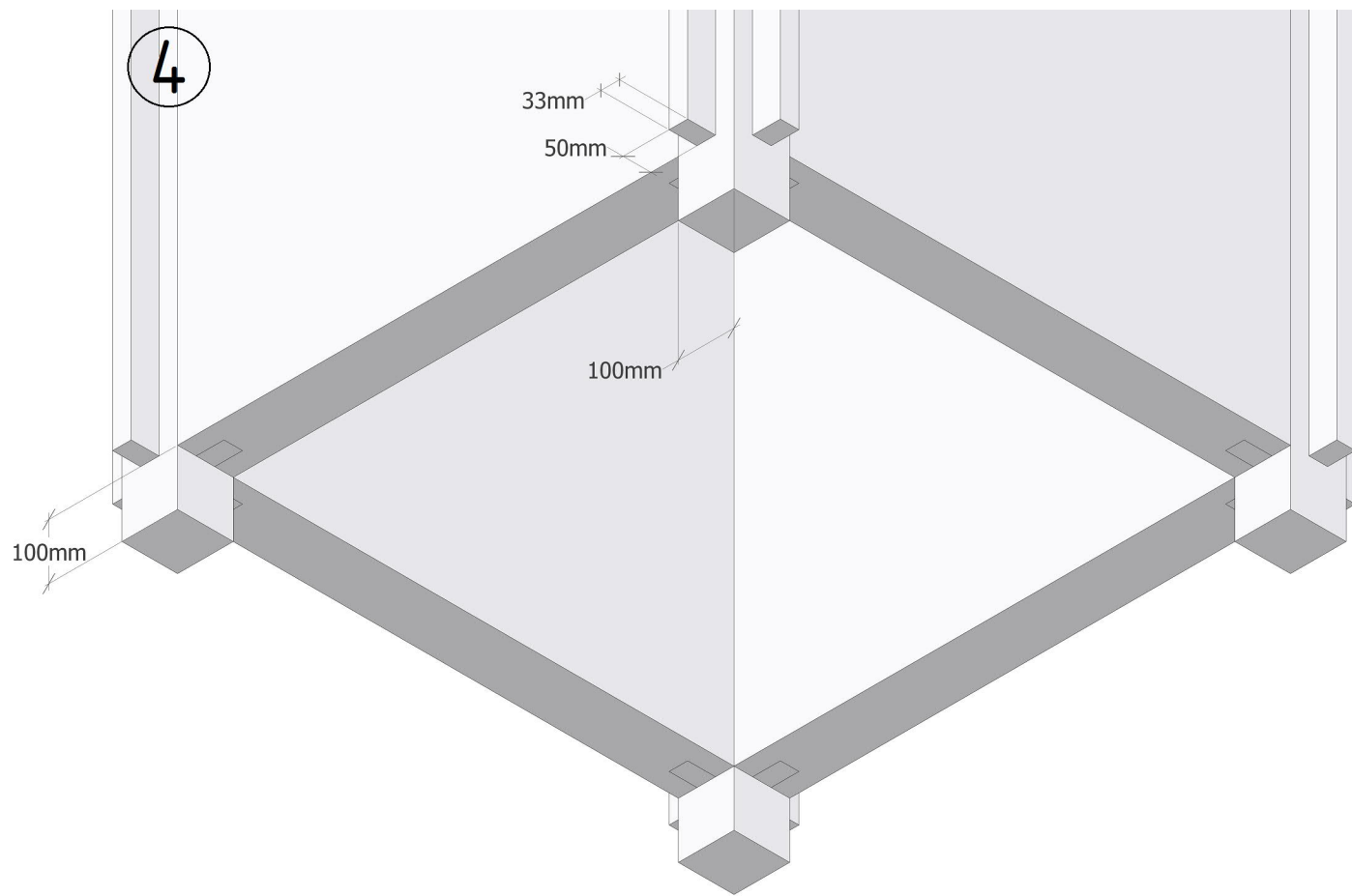
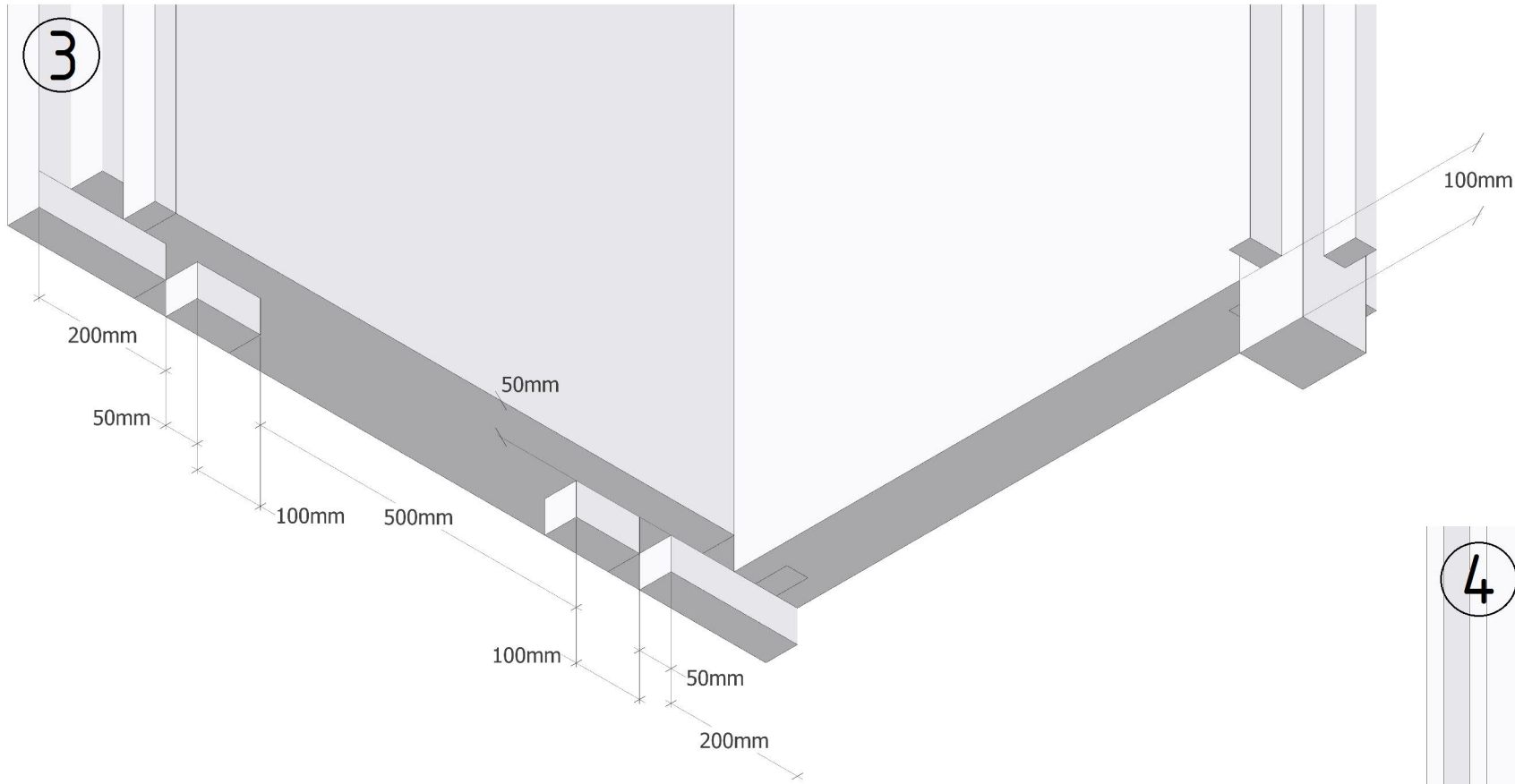


⑦





MEASUREMENTS (GENERAL)

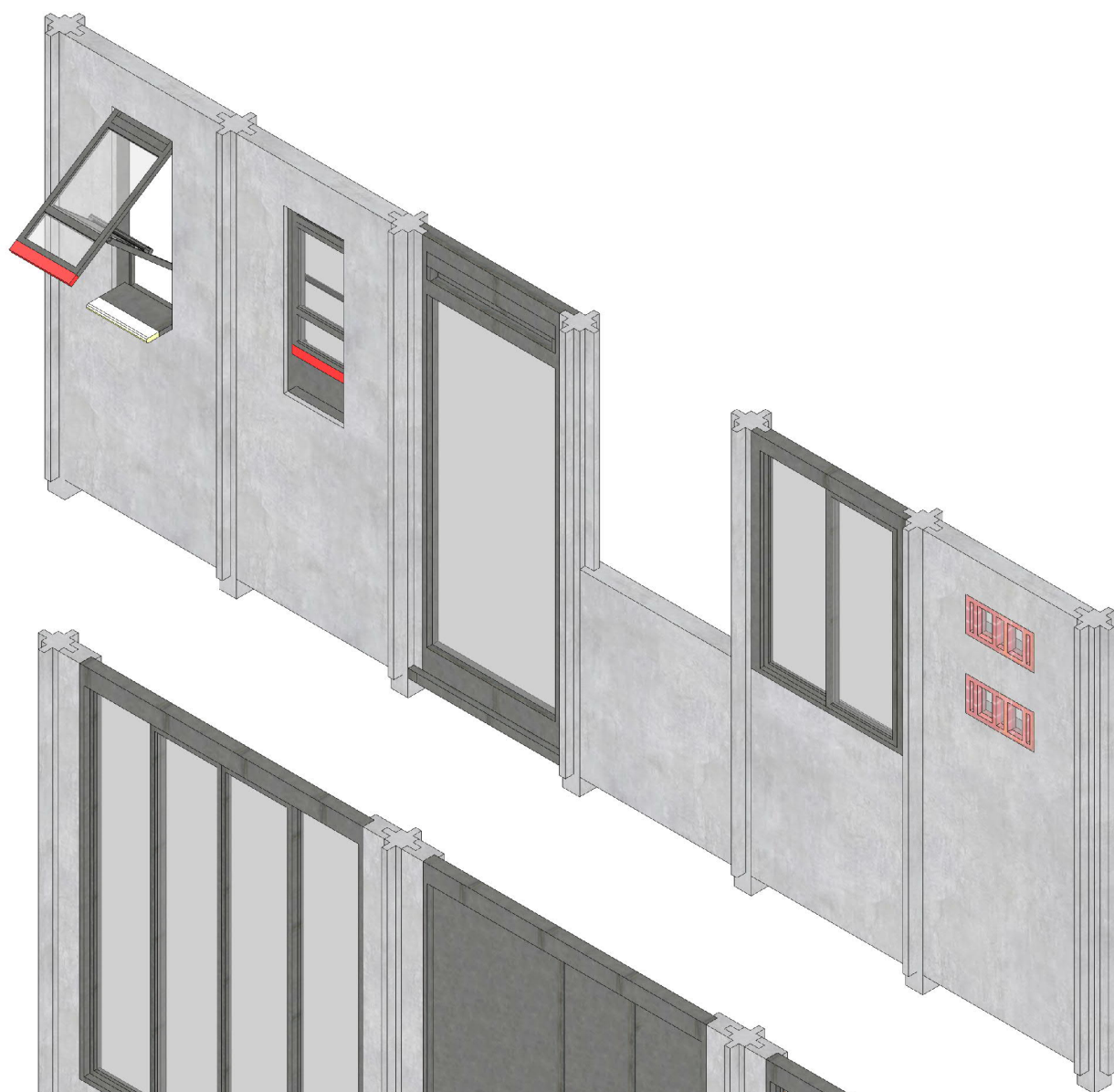


VARIETIES OF WALL PANELS



④

OPENINGS



LARGE ACCESS

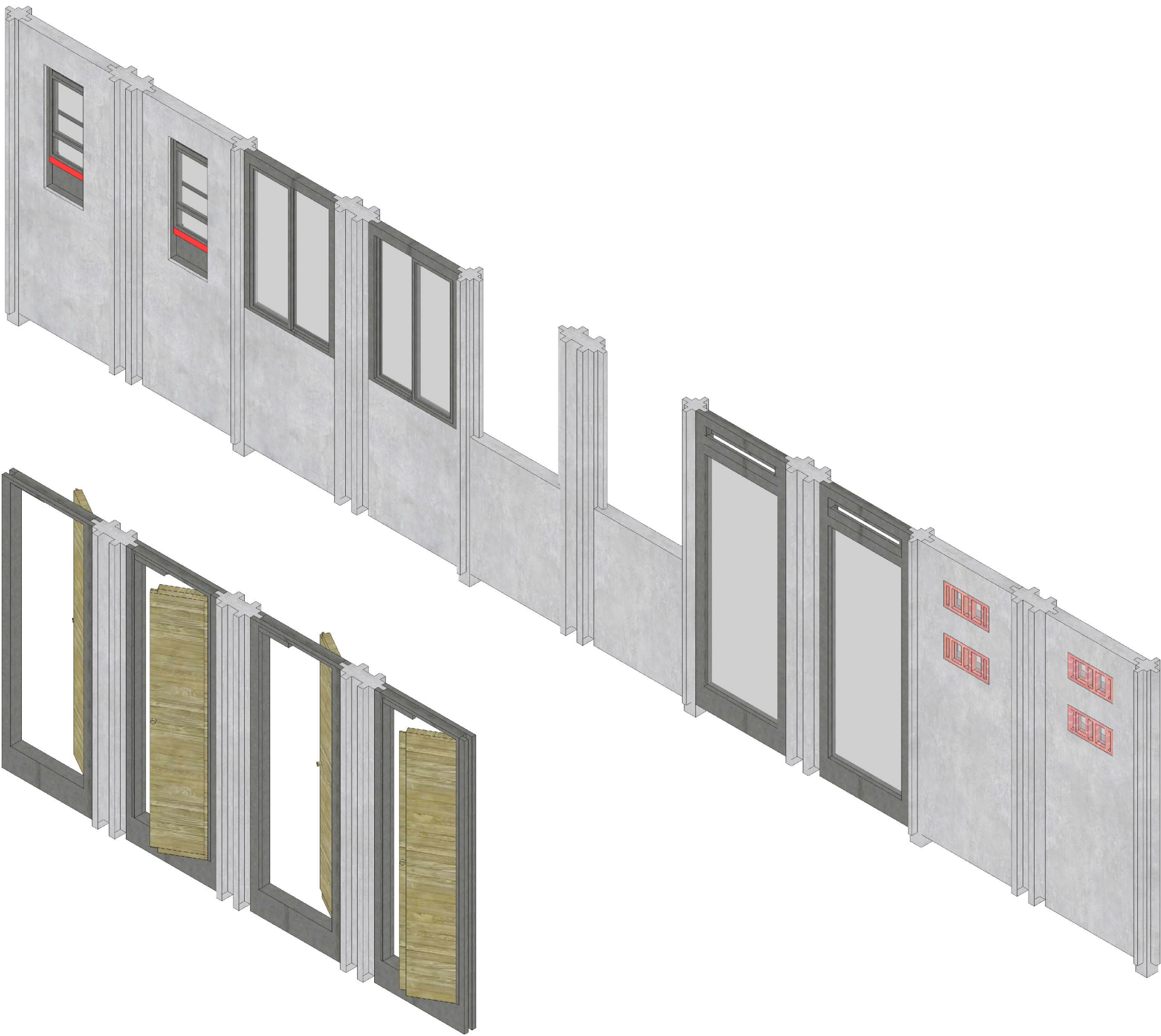


ACCESS





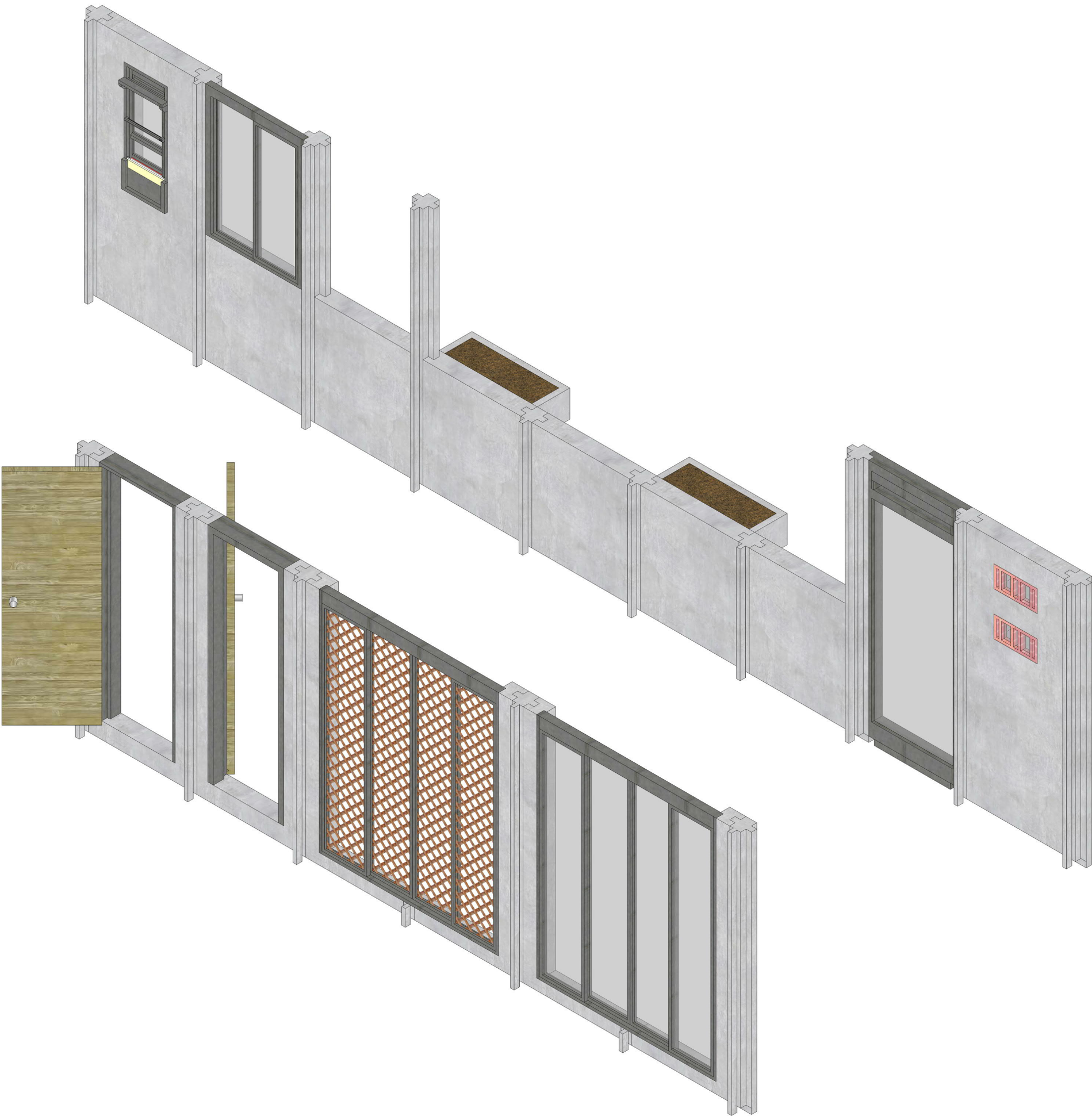
OPENINGS



ACCESS



OPENINGS



ACCESS

